

TRACTATENBLAD

VAN HET

KONINKRIJK DER NEDERLANDEN

JAARGANG 2005 Nr. 55

A. TITEL

*Internationaal Verdrag voor de beveiliging van mensenlevens op zee,
1974, met Bijlage;
Londen, 1 november 1974*

B. TEKST

De Engelse en de Franse tekst van Verdrag en Bijlage zijn geplaatst in *Trb.* 1976, 157.

Voor correcties van de Bijlage zie *Trb.* 1985, 155.

Voor wijzigingen van de Bijlage zie *Trb.* 1983, 32, rubriek J van *Trb.* 1983, 173, van *Trb.* 1985, 155, van *Trb.* 1989, 42 en 98, van *Trb.* 1992, 24, van *Trb.* 1994, 19, van *Trb.* 1996, 18, 128 en 257, van *Trb.* 1997, 226, van *Trb.* 1998, 155 en rubriek J hieronder.

C. VERTALING

Zie *Trb.* 1977, 77, *Trb.* 1983, 32 en rubriek J van *Trb.* 1983, 173, de rubrieken C en J van *Trb.* 1985, 155, rubriek J van *Trb.* 1989, 42, en 98, van *Trb.* 1992, 24 en 173, van *Trb.* 1994, 19 en 134, van *Trb.* 1995, 236, van *Trb.* 1996, 18 en 128, van *Trb.* 1996, 340, van *Trb.* 1998, 155 en rubriek J hieronder.

D. PARLEMENT

Zie *Trb.* 1979, 128, *Trb.* 1994, 19, *Trb.* 1995, 236, *Trb.* 1996, 340 en *Trb.* 1998, 155.

E. BEKRACHTIGING

Zie *Trb.* 1977, 77, *Trb.* 1979, 128, *Trb.* 1983, 32 en 173, *Trb.* 1985, 155, *Trb.* 1994, 134 en *Trb.* 1995, 236.

Behalve de aldaar genoemde staten heeft nog de volgende staat in overeenstemming met artikel IX, letter b, van het Verdrag een akte van bekrachtiging, aanvaarding of goedkeuring bij de Secretaris-Generaal van de Internationale Maritieme Organisatie nedergelegd:

Belarus 7 januari 1994

F. TOETREDING

Zie *Trb.* 1976, 157, *Trb.* 1977, 77, *Trb.* 1979, 128, *Trb.* 1983, 32 en 173, *Trb.* 1985, 155, *Trb.* 1986, 51, *Trb.* 1989, 42 en 98, *Trb.* 1992, 24 en 173, *Trb.* 1994, 19 en 134, *Trb.* 1995, 236, *Trb.* 1996, 257 en *Trb.* 1998, 155.

Behalve de aldaar genoemde staten hebben nog de volgende staten in overeenstemming met artikel IX, letter b, van het Verdrag een akte van toetreding bij de Secretaris-Generaal van de Internationale Maritieme Organisatie nedergelegd:

Bolivia	4 juni 1999
de Comoren	22 november 2000
Dominica	21 juni 2000
Kenia	21 juli 1999
Mongolië	26 juni 2002
Namibië	27 november 2000
Sao Tomé en Principe	29 oktober 1998
Syrië	20 juli 2001
Tanzania	28 maart 2001

Verklaring van voortgezette gebondenheid

De volgende staten hebben een verklaring van voortgezette gebondenheid aan het Protocol afgelegd:

Russische Federatie	9 januari 1980
Slowakije	1 januari 1993
Tsjechië	1 januari 1993

G. INWERKINGTREDING

Zie *Trb.* 1979, 128.

H. TOEPASSELIJKVERKLARING

Zie 1983, 32, *Trb.* 1985, 155, *Trb.* 1989, 42, *Trb.* 1992, 24 en *Trb.* 1998, 155.

J. GEGEVENS

Zie *Trb.* 1976, 157, *Trb.* 1977, 77, *Trb.* 1979, 128, *Trb.* 1983, 32 en 173, *Trb.* 1985, 155, *Trb.* 1986, 51, *Trb.* 1989, 42 en 98, *Trb.* 1992, 24 en 173, *Trb.* 1994, 19 en 134, *Trb.* 1995, 236, *Trb.* 1996, 18, 128, 257 en 340, *Trb.* 1997, 226 en *Trb.* 1998, 155.

Verwijzingen

- Titel : Verdrag nopens de Internationale Maritieme Organisatie;
Genève, 6 maart 1948
Laatste *Trb.* : *Trb.* 2002, 76
- Titel : Handvest van de Verenigde Naties;
San Francisco, 26 juni 1945
Laatste *Trb.* : *Trb.* 2004, 240
- Titel : Protocol van 1978 bij het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974
Londen, 17 februari 1978
Laatste *Trb.* : *Trb.* 1996, 223
- Titel : Protocol van 1988 bij het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974
Londen, 11 november 1988
Laatste *Trb.* : *Trb.* 1990, 57

Wijzigingen

Resolutie 1 van 29 november 1995

Zie *Trb.* 1997, 226 voor de Engelse tekst en *Trb.* 1998, 155 voor de vertaling.

Bij proces-verbaal van correctie van 11 juni 1998 heeft de Secretaris-Generaal van de Internationale Maritieme Organisatie een correctie in de tekst van Resolutie 1 aangebracht. De correctie in de Engelse tekst luidt als volgt:

CHAPTER II-1

Regulation 19

paragraph 4, line 2
Replace “paragraph 2” by “paragraph 2 and 3”

In de vertaling onder Hoofdstuk II-1, Voorschrift 19, paragraaf 4, dient „paragraaf 2” te worden vervangen door „paragraaf 2 en 3”.

Bij proces-verbaal van correctie van 18 maart 1999 heeft de Secretaris-Generaal van de Internationale Maritieme Organisatie een aantal correcties in de tekst van Resolutie 1 van 29 november 1995 aangebracht. De correcties in de Engelse tekst luiden als volgt:

CHAPTER II-1

Regulation 19,
 Paragraph 2, line 1
 Replace „Where” by „In ro-ro passenger ships, where”
 Paragraph 3, line 1
 Replace „Where” by „In ro-ro passenger ships, where”
 Paragraph 4, line 1
 Insert „ro-ro passenger” between „In” and „ships”

In de vertaling onder Hoofdstuk II-1, Voorschrift 19, dient in paragraaf 2, eerste regel, en paragraaf 3, eerste regel „Indien ..” te worden vervangen door „Indien op ro-ro passagiersschepen ..”.

In datzelfde Voorschrift dient in paragraaf 4, eerste regel, „Op schepen ...” te worden vervangen door „Op ro-ro passagiersschepen ..”.

Resolutie MSC.47(66) van 4 juni 1996

De wijzigingen zijn op 1 juli 1998 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

Bij proces-verbaal van correctie van 29 januari 1999 heeft de Secretaris-Generaal van de Internationale Maritieme Organisatie een aantal correcties in de tekst van Resolutie MSC.47(66) aangebracht. De correcties in de Engelse tekst luiden als volgt:

CHAPTER III

paragraph 5.1

line 1 – delete “II-2/41.2” and insert “II-2/41-2”

line 2 – delete “6.4.2” and insert “4.2”

De vertaling (inclusief correctie) in het Nederlands van Resolutie MSC.47(66) van 4 juni 1996 luidt als volgt (zie *Trb.* 1998, 155 voor de Engelse tekst):

Resolutie MSC.47(66)

(aangenomen op 4 juni 1996)

**Aanneming van wijzigingen op het Internationaal Verdrag voor de
beveiliging van mensenlevens op zee, 1974**

De Maritieme Veiligheidscommissie,

Herinnerend aan artikel 28(b) van het Verdrag inzake de Internationale Maritieme Organisatie betreffende de taken van de Commissie,

Voorts herinnerend aan artikel VIII(b) van het Internationaal Verdrag voor de beveiliging van mensenlevens op zee (SOLAS), 1974, hierna te noemen „het Verdrag”, betreffende de procedures voor wijziging van de Bijlage bij het Verdrag, met uitzondering van Hoofdstuk I,

Na bestudering, tijdens haar zesenzestigste zitting, van wijzigingen van het Verdrag, voorgesteld en rondgezonden overeenkomstig artikel VIII(b)(i) van het Verdrag,

1. Neemt, overeenkomstig artikel VIII(b)(iv) van het Verdrag, de wijzigingen van het Verdrag aan, waarvan de tekst is vervat in de Bijlage bij deze Resolutie;

2. Bepaalt, in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag, dat de wijzigingen worden geacht te zijn aanvaard op 1 januari 1998, tenzij vóór die datum meer dan een derde van de Verdragsluitende Regeringen die Partij zijn bij het Verdrag, of de Verdragsluitende Regeringen waarvan de gezamenlijke koopvaardijvloot ten minste vijftig procent van de brutotonnage van de wereldkoopvaardijvloot vormen, hun bezwaren tegen de wijzigingen kenbaar hebben gemaakt;

3. Nodigt de Verdragsluitende Regeringen uit er nota van te nemen dat, in overeenstemming met artikel VIII(b)(vii)(2) van het Verdrag, de wijzigingen na hun aanvaarding in overeenstemming met punt 2 hierboven, in werking treden op 1 juli 1998;

4. Verzoekt de Secretaris-Generaal, in overeenstemming met artikel VIII(b)(v) van het Verdrag, voor eensluidend gewaarmerkte afschriften van deze resolutie en van de tekst van de in de Bijlage vervatte wijzigingen te doen toekomen aan alle Verdragsluitende Regeringen die Partij zijn bij het Verdrag;

5. Verzoekt de Secretaris-Generaal voorts afschriften van deze resolutie en de Bijlage daarbij te doen toekomen aan Leden van de Organisatie waarvan de Regeringen geen Partij zijn bij het Verdrag.

Bijlage

Wijzigingen op het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974

HOOFDSTUK II-1

CONSTRUCTIE – WATERDICHTTE INDELING EN STABILITEIT, MACHINE-INSTALLATIES EN ELEKTRISCHE INSTALLATIES

- 1 De huidige titel van hoofdstuk II-1 wordt vervangen door:
„CONSTRUCTIE – STRUCTUUR, WATERDICHTTE INDELING EN STABILITEIT, MACHINE-INSTALLATIES EN ELEKTRISCHE INSTALLATIES”
- 2 Het volgende nieuwe deel A-1 wordt gevoegd tussen deel A en deel B:

DEEL A-1

STRUCTUUR VAN SCHEPEN

Voorschrift 3-1

Structurele, mechanische en elektrische vereisten voor schepen

In aanvulling op de elders in de huidige voorschriften vervatte vereisten, moeten schepen worden ontworpen, gebouwd en onderhouden overeenkomstig de structurele, mechanische en elektrische vereisten van een door de Administratie overeenkomstig de bepalingen van voorschrift XI/1 erkend classificatiebureau of overeenkomstig de toepasselijke nationale standaarden van de Administratie die resulteren in een vergelijkbaar veiligheidsniveau.

Voorschrift 3-2

Voorkoming van corrosie van zeewaterballasttanks

1 Dit voorschrift is van toepassing op olietankschepen en bulkcarriers gebouwd op of na 1 juli 1998.

2 Alle zeewaterballasttanks moeten zijn uitgerust met een efficiënt systeem ter voorkoming van corrosie, zoals een harde beschermende coating of een soortgelijke bescherming. De coatings moeten bij voor-

keur van een lichte kleur zijn. De regeling voor de keuze, het aanbrengen en het onderhoud van het systeem moet goedgekeurd zijn door de Administratie, met inachtneming van de door de Organisatie aangenomen richtlijnen. Waar nodig moeten tevens opofferingsanodes worden gebruikt.

Voorschrift 8

Stabiliteit van passagiersschepen in beschadigde toestand

3 De volgende zin wordt toegevoegd aan het einde van paragraaf 2.3.1:

„Dit bereik kan worden beperkt tot een minimum van 10°, indien het gebied onder de kromme gelijk is aan hetgeen is omschreven in paragraaf 2.3.2, verhoogd met:

$\frac{15}{\text{bereik}}$
waarbij het bereik wordt uitgedrukt in graden.”

4 De woorden „bereik omschreven in 2.3.1” in paragraaf 2.3.3 worden vervangen door de woorden „bereik van positieve stabiliteit”.

Voorschrift 25-1

Toepassing

5 De volgende zin wordt toegevoegd aan het einde van de bestaande paragraaf 1:

„De voorschriften van dit deel zijn ook van toepassing op vrachtschepen met een lengte van 80 m in L_s en meer maar niet langer dan 100 m in L_s , gebouwd op of na 1 juli 1998.”

Voorschrift 25-3

Vereiste indelingsindex R

6 De bestaande paragraaf 2 wordt vervangen door:
„2 De mate van indeling wordt als volgt bepaald door de vereiste indelingsindex R:

.1 voor schepen langer dan 100 m in L_s

$$\gg R = (0,002 + 0,0009L_s)1/3$$

waarbij L_s wordt uitgedrukt in meters; en

.2 voor schepen met een lengte van 80 m in L_s en meer maar niet langer dan 100 m in L_s :

$$R = 1 - [1 / (1 + \frac{L_s}{100} \frac{R_o}{1 - R_o})],$$

waarbij R_o de waarde R is als berekend overeenkomstig de formule uit paragraaf 2.1.”

Voorschrift 45

Voorzorgsmaatregelen tegen gevaar van aanraken van onder spanning staande delen, tegen brand en andere gevaren van elektrische oorsprong

7 De woorden „55 V” in paragraaf 1.1.1 worden vervangen door „50 V”.

8 De huidige tekst van hoofdstuk III wordt vervangen door:

„HOOFDSTUK III

REDDINGSMIDDELEN EN -VOORZIENINGEN

DEEL A

ALGEMEEN

Voorschrift 1

Toepassing

1 Tenzij uitdrukkelijk anders is bepaald, is dit hoofdstuk van toepassing op schepen waarvan de kiel is gelegd of waarvan de bouw zich in een soortgelijk stadium bevindt op of na 1 juli 1998.

2 Voor de toepassing van dit hoofdstuk wordt verstaan onder *een soortgelijk bouwstadium* het stadium waarin:

- .1 de bouw specifiek voor een bepaald schip aanvangt; en
- .2 is aangevangen met de montage van dat schip, dat ten minste 50 ton of 1 procent van de geschatte massa van alle bouwmaterialen omvat, naar gelang van welke van beide het minst is.

3 Voor de toepassing van dit hoofdstuk:

- .1 wordt verstaan onder *schepen die worden gebouwd: schepen waarvan de kiel wordt gelegd of waarvan de bouw zich in een soortgelijk stadium bevindt*;
- .2 wordt verstaan onder *alle schepen*: schepen gebouwd vóór, op of na 1 juli 1998; de uitdrukkingen *alle passagiersschepen* en *alle vrachtschepen* worden dienovereenkomstig uitgelegd;
- .3 wordt een vrachtschip – ongeacht wanneer dit is gebouwd – dat wordt verbouwd tot passagiersschip, beschouwd als een passagiersschip gebouwd op de datum waarop een dergelijke verbouwing wordt aangevangen.

4. Voor schepen gebouwd vóór 1 juli 1998, moet de Administratie:

- .1 er voor zorg dragen dat, met inachtneming van het bepaalde in paragraaf 4.2, wordt voldaan aan de vereisten die krachtens Hoofdstuk III van het Internationaal Verdrag voor de beveili-

- ging van mensenlevens op zee, 1974, vóór 1 juli 1998 van toepassing zijn op nieuwe of bestaande schepen, zoals in genoemd hoofdstuk is voorgeschreven; en
- .2 er voor zorg dragen dat wanneer reddingsmiddelen of -voorzieningen op dergelijke schepen worden vervangen, of wanneer dergelijke schepen reparaties, veranderingen of wijzigingen van ingrijpende aard ondergaan die vervanging van, of een aanvulling op hun bestaande reddingsmiddelen of -voorzieningen met zich meebrengen, deze reddingsmiddelen of -voorzieningen, voor zover dat redelijk en uitvoerbaar is, voldoen aan de vereisten van dit hoofdstuk. Wanneer echter een reddingsboot of -vlot anders dan een opblaasbaar reddingsvlot wordt vervangen zonder het bijbehorende tewaterlatingsmiddel te vervangen, of omgekeerd, dan kan de reddingsboot, het reddingsvlot of het tewaterlatingsmiddel van hetzelfde type zijn als dat wat wordt vervangen.

Voorschrift 2

Vrijstellingen

1 De Administratie kan, wanneer zij van oordeel is dat de beschutte aard en de omstandigheden van de reis zodanig zijn dat toepassing van bepaalde vereisten van dit hoofdstuk redelijk noch noodzakelijk is, bepaalde schepen of klassen van schepen, die in de loop van hun reis niet meer dan 20 zeemijl uit het dichtstbijzijnde land varen, vrijstellen van die vereisten.

2 Wanneer passagiersschepen worden gebruikt op bijzondere reizen voor het vervoer van grote aantallen passagiers op deze reizen, zoals bij het pelgrimsvervoer, kan de Administratie, indien zij ervan overtuigd is dat het praktisch onuitvoerbaar is naleving van de vereisten van dit hoofdstuk op te leggen, dergelijke schepen vrijstellen van die vereisten, mits die schepen volledig voldoen aan de bepalingen van:

- .1 de voorschriften gehecht aan de Overeenkomst betreffende passagiersschepen gebezigd op bijzondere reizen, 1971; en
- .2 de voorschriften gehecht aan het Protocol betreffende de vereisten ten aanzien van passagiersruimten op passagiersschepen gebruikt op bijzondere reizen.

Voorschrift 3

Begripsomschrijvingen

Voor de toepassing van dit hoofdstuk, tenzij uitdrukkelijk anders bepaald, wordt verstaan onder:

1 Beschermende kleding tegen afkoeling: een beschermend pak ontworpen voor gebruik door bemanningen van hulpverleningsboten en bemanningen van mariene evacuatiesystemen.

2 Sloepsgast: een persoon die in het bezit is van een diploma inzake het gebruik van reddingsboten en -vlotten uitgereikt namens of als geldig erkend door de Administratie overeenkomstig de van kracht zijnde bepalingen van het Internationale Verdrag betreffende de normen voor zeevarenden inzake opleiding, diplomering en wachtdienst; of een persoon die in het bezit is van een diploma uitgereikt of erkend door de Administratie van een Staat die geen Partij is bij dit Verdrag, voor hetzelfde doel als een diploma vallende onder de verdragsbepalingen.

3 Ontdekking: de vaststelling van de plaats van de overlevenden of de reddingsboten en -vlotten.

4 Inschepingsladder: de ladder die op de inschepingsplaats voor de reddingsboten en -vlotten is aangebracht teneinde een veilige toegang te bieden tot de reddingsboten en -vlotten nadat deze te water gelaten zijn.

5 Te water laten door middel van vrij opdrijven: de methode van te water laten van een reddingsboot of -vlot waarbij deze respectievelijk dit automatisch van een zinkend schip wordt ontkoppeld en klaar is voor gebruik.

6 Te water laten door middel van vrije val: de methode van te water laten van een reddingsboot of -vlot waarbij deze respectievelijk dit met volledige bezetting en volledige uitrusting wordt ontkoppeld en vervolgens vrij in het water kan vallen zonder afgeremd te worden.

7 Overlevingspak: een beschermend pak dat het verlies van lichaamswarmte van een persoon gekleed in een dergelijk pak en liggend in koud water vermindert.

8 Opblaasbaar toestel: een toestel dat afhankelijk is van niet verstijfde, met gas gevulde drijfkamers en dat normaal, tot aan de klaar voor gebruik situatie, in onopgeblazen toestand wordt gehouden.

9 Toestel in opgeblazen toestand: een toestel dat afhankelijk is van niet verstijfde met gas gevulde drijfkamers en dat altijd in opgeblazen toestand en klaar voor gebruik wordt gehouden.

10 International Life-Saving Appliance (LSA) Code (internationale code inzake reddingsmiddelen, in dit hoofdstuk aangeduid als „de Code”) de Internationale LSA Code aangenomen door de Maritieme Veiligheidscommissie van de Organisatie door resolutie MSC.48(66), eventueel als gewijzigd door de Organisatie, op voorwaarde dat deze wijzigingen worden aangenomen, in werking worden gesteld en van kracht worden overeenkomstig het bepaalde van artikel VIII van dit Verdrag betreffende de procedure voor wijziging die van toepassing is op de Bijlage, met uitzondering van Hoofdstuk I.

11 Tewaterlatingsmiddel of -voorziening: een middel of voorziening om een reddingsboot, -vlot of hulpverleningsboot van de opstellingsplaats veilig naar het water te brengen.

12 Lengte: 96% van de totale lengte op een waterlijn op 85% van de kleinste holte naar de mal gemeten vanaf de bovenzijde van de kiel, of

de lengte van de voorzijde van de voorsteven tot de hartlijn van de roerkoning op die waterlijn, indien deze laatste lengte groter is. Bij schepen die zijn ontworpen met een stuurlast moet de waterlijn waarop deze lengte gemeten wordt, evenwijdig aan de waterlijn worden genomen.

13 Ballasttoestand: de beladingstoestand van het schip zonder kop- of stuurlast en zonder lading, maar met 10% van de voorraden en brandstof aan boord, en in het geval van een passagiersschip, met alle passagiers en de volledige bemanning en hun bagage.

14 Marien evacuatiesysteem: een voorziening voor de snelle overbrenging van personen van het inschepingsdek van een schip naar een drijvende reddingsboot of drijvend reddingsvlot.

15 Holte naar de mal

- .1 De holte naar de mal is de verticale afstand gemeten van de bovenkant van de kiel tot de bovenkant van de balken van het vrijboorddek in de zijde. Bij houten schepen en composiet-schepen wordt de afstand gemeten vanaf de onderkant van de sponning van de kiel. Indien de vorm in het onderste gedeelte van het grootspant hol verloopt of indien dikke zandstroken zijn aangebracht, wordt de afstand gemeten vanaf het punt waar de lijn die van het vlakke deel van het scheepsvlak naar hart schip wordt doorgetrokken, de zijkant van de kiel snijdt.
- .2 Bij schepen waar de overgang van de huidbeplating naar de dekbeplating als een rondgezette plaat is uitgevoerd wordt de holte naar de mal gemeten tot het snijpunt van de doorgestrookte onderzijde van de dekbeplating en de binnenzijde van de huidbeplating.
- .3 Indien het vrijboorddek verspringt en het verhoogde gedeelte zich uitstrekt tot voorbij het punt waar de holte naar de mal moet worden bepaald, wordt de holte naar de mal gemeten tot een referentielijn die vanaf het lage gedeelte van het dek evenwijdig aan het verhoogde gedeelte wordt getrokken.

16 Reddingsmiddelen of -voorzieningen van een nieuw ontwerp: reddingsmiddelen of -voorzieningen die nieuwe kenmerken vertonen die niet geheel vallen onder de voorschriften van dit hoofdstuk, maar die een gelijke of hogere norm van veiligheid bieden.

17 Positieve stabiliteit: het vermogen van een vaartuig terug te keren naar zijn oorspronkelijke positie na afloop van een kenterend moment.

18 Terugzettijd voor een hulpverleningsboot: de tijd die benodigd is om de boot op te halen naar een plaats waar de personen aan boord kunnen ontschepen op het dek van het schip. De terugzettijd omvat ook de tijd die benodigd is om voorbereidingen te treffen voor het terugplaatsen van de hulpverleningsboot aan boord, zoals het werpen en vastmaken van een vanglijn, aan de tewaterlatingsvoorziening koppelen van de hulpverleningsboot en de tijd van het ophalen van de hulpverlenings-

boot. De terugzettijd omvat niet de tijd die benodigd is om de tewaterlatingsvoorziening te laten zakken tot de positie voor terugplaatsing van de hulpverleningsboot.

19 Hulpverleningsboot: een boot ontworpen voor het redden van mensen in nood en het begeleiden van reddingsboten en -vlotten.

20 Terughalen: het veilig redden uit zee van overlevenden.

21 Ro-ro passagiersschip: een passagiersschip met ro-ro laadruimten of ruimten van bijzondere aard zoals omschreven in voorschrift II-2/3.

22 Korte internationale reis: een internationale reis waarop het schip zich niet meer dan 200 zeemijl verwijderd van een haven of een plaats waar passagiers en bemanning veilig kunnen worden geland. Noch de afstand tussen de laatste aanloophaven in het land waar de reis aanvangt en de uiteindelijke haven van bestemming, noch de terugreis mag 600 zeemijl overschrijden. De uiteindelijke haven van bestemming is de laatste aanloophaven in de vastgestelde reis waar vandaan het schip de terugreis aanvaardt naar het land waar de reis aanvangt.

23 Reddingsboot of -vlot: een vaartuig dat personen die in nood verkeren, in leven kan houden vanaf het moment dat zij het schip verlaten.

24 Hulpmiddel tegen warmteverlies: een zak of pak vervaardigd uit waterdicht materiaal met een zeer lage warmtegeleiding.

Voorschrift 4

Beoordeling, beproeving en goedkeuring van reddingsmiddelen en -voorzieningen

1 Behalve zoals bepaald in de paragrafen 5 en 6 moeten de reddingsmiddelen en -voorzieningen die in dit hoofdstuk zijn vereist, worden goedgekeurd door de Administratie.

2 Alvorens reddingsmiddelen en -voorzieningen goed te keuren, moet de Administratie zich ervan overtuigen dat deze reddingsmiddelen en -voorzieningen:

- .1 worden beproefd om vast te stellen dat zij voldoen aan de vereisten van dit hoofdstuk en de Code, overeenkomstig de aanbevelingen van de Organisatie; of
- .2 ten genoegen van de Administratie met succes proeven hebben ondergaan, die in wezen gelijkwaardig zijn aan die welke in die aanbevelingen zijn voorgeschreven.

3 Alvorens reddingsmiddelen en -voorzieningen van een nieuw ontwerp goed te keuren, moet de Administratie zich ervan overtuigen dat deze reddingsmiddelen en -voorzieningen:

- .1 voldoen aan veiligheidsnormen die ten minste gelijkwaardig zijn aan de vereisten van dit hoofdstuk en de Code en die beoor-

deeld en beproefd zijn overeenkomstig de aanbevelingen van de Organisatie; of

.2 ten genoegen van de Administratie met succes een beoordeling en proeven hebben ondergaan, die in wezen gelijkwaardig zijn aan die aanbevelingen.

4 De door de Administratie aangenomen goedkeuringsprocedures moeten tevens de voorwaarden waaronder de goedkeuring geldig blijft of wordt ingetrokken, omvatten.

5 Alvorens reddingsmiddelen en -voorzieningen die nog niet eerder door de Administratie werden goedgekeurd te aanvaarden, moet de Administratie ervan overtuigd zijn dat die reddingsmiddelen en -voorzieningen voldoen aan de vereisten van dit hoofdstuk en de Code.

6 Reddingsmiddelen die krachtens dit hoofdstuk voorgeschreven zijn en waarvoor geen gedetailleerde bijzonderheden in de Code zijn opgenomen moeten ten genoegen van de Administratie zijn.

Voorschrift 5

Productiecontrole

De Administratie moet voorschrijven dat reddingsmiddelen onderworpen worden aan de productiecontroles die noodzakelijk zijn om te waarborgen dat zij volgens dezelfde normen worden vervaardigd als het goedgekeurde prototype.

DEEL B

VEREISTEN TEN AANZIEN VAN SCHEPEN EN REDDINGSMIDDELEN

AFDELING I

PASSAGIERSSCHEPEN EN VRACHTSCHEPEN

Voorschrift 6

Communicatie

1 Paragraaf 2 is van toepassing op alle passagiersschepen en op alle vrachtschepen met een bruto-tonnage van 300 ton of meer.

2 Radioreddingsmiddelen

2.1 Tweeweg-VHF-radiotelefonietoestellen

2.1.1 Er moeten ten minste drie tweeweg-VHF-radiotelefonietoestellen aan boord zijn van ieder passagiersschip en van ieder vrachtschip met een bruto-tonnage van 500 ton of meer. Er moeten ten minste twee tweeweg-VHF-radiotelefonietoestellen aan boord zijn van ieder vracht-

schip met een bruto-tonnage van 300 ton of meer, maar minder dan 500 ton. Deze toestellen moeten voldoen aan uitvoeringsnormen die niet lager zijn dan die welke door de Organisatie zijn aangenomen. Indien een tweeweg-VHF-radiotelefonietoestel vast wordt aangebracht in een reddingsboot of -vlot, moet het voldoen aan uitvoeringsnormen die niet lager zijn dan die welke door de Organisatie zijn aangenomen.

2.1.2 Tweeweg-VHF-radiotelefonietoestellen die aan boord van schepen zijn aangebracht vóór 1 februari 1992 en niet geheel voldoen aan de door de Organisatie aangenomen uitvoeringsnormen, kunnen door de Administratie worden aanvaard tot 1 februari 1999, mits de Administratie ervan overtuigd is dat zij compatibel zijn met goedgekeurde tweeweg-VHF-radiotelefonietoestellen.

2.2 Radartransponders

Aan elke zijde van ieder passagiersschip en van ieder vrachtschip met een bruto-inhoud van 500 ton of meer moet ten minste één radartransponder zijn geplaatst. Op ieder vrachtschip met een bruto-inhoud van 300 ton of meer, maar minder dan 500 ton, moet ten minste één radartransponder zijn geplaatst. Deze radartransponders moeten voldoen aan uitvoeringsnormen die niet lager zijn dan die welke door de Organisatie zijn aangenomen. De radartransponders moeten zodanig zijn geplaatst dat zij snel in een reddingsboot of -vlot, anders dan het reddingsvlot of de reddingsvloten vereist door voorschrift 31.1.4, kunnen worden gezet. Een andere mogelijkheid is dat één radartransponder wordt geplaatst in elke reddingsboot of elk reddingsvlot, anders dan vereist door voorschrift 31.1.4. Op schepen met ten minste twee radartransponders en uitgerust met reddingsboten die door middel van vrije val te water worden gelaten, moet één van de radartransponders worden geplaatst in een reddingsboot die door middel van vrije val te water wordt gelaten en de andere in de directe nabijheid van de brug, zodanig dat deze aan boord kan worden gebruikt en direct naar één van de andere reddingsboten en -vloten kan worden overgebracht.

3 Noodsignalen

Op of in de nabijheid van de brug moeten ten minste twaalf valschermsignalen, die voldoen aan de vereisten van sectie 3.1 van de Code, zijn geplaatst.

4 Communicatie aan boord en alarmsystemen

4.1 Ten behoeve van de communicatie in twee richtingen tussen noodcontrolestations, verzamel- en inschepingsplaatsen en strategische punten aan boord moet er aan boord een nood-communicatiesysteem zijn, vast aangebracht dan wel draagbaar, of een combinatie van beide.

4.2 Er moet een algemeen alarmsysteem dat voldoet aan de vereisten van paragraaf 7.2.1 van de Code zijn aangebracht, dat moet worden gebruikt om de passagiers en de bemanning naar de verzamelplaatsen op te roepen en om de in de verlaatrol opgenomen handelingen te doen aangeven. Het systeem moet zijn aangevuld door of een scheepsomroepstelsel dat voldoet aan de vereisten van paragraaf 7.2.2 van de Code

of een ander doelmatig communicatiemiddel. Geluidssystemen voor algemene omroep- en radiovoorziening moeten automatisch worden uitgeschakeld wanneer het algemene alarmsysteem wordt geactiveerd.

4.3 Op passagiersschepen moet het algemeen alarmsysteem voor noodsituaties hoorbaar zijn aan alle open dekken.

4.4 Op schepen die zijn uitgerust met een marien evacuatiesysteem, moet de communicatie tussen de inschepingsplaats en het platform of de reddingsboot of het reddingsvlot worden gewaarborgd.

5 Scheepsomroepsystemen op passagiersschepen

5.1 In aanvulling op de vereisten van voorschrift II-2/40.5 of voorschrift II-2/41-2, naar gelang van het geval, en die van paragraaf 4.2, moeten alle passagiersschepen worden uitgerust met een scheepsomroepsysteem. Met betrekking tot passagiersschepen gebouwd vóór 1 juli 1997 zijn de vereisten van de paragrafen 5.2 en 5.4, onverminderd de bepalingen van paragraaf 5.5, uiterlijk van toepassing op de datum van het eerste periodieke onderzoek na 1 juli 1997.

5.2 Het scheepsomroepsysteem moet duidelijk hoorbaar zijn boven de in alle in paragraaf 7.2.2.1 van de Code bedoelde ruimten heersende geluiden, en moet zijn voorzien van een overnamefunctie die kan worden bediend vanaf een plaats op de brug of op elke andere plaats aan boord die de Administratie nodig acht, zodat alle noodberichten worden verspreid indien een van de luidsprekers in de desbetreffende ruimten uitgeschakeld is, het volume ervan laag staat of indien het scheepsomroepsysteem voor andere doeleinden wordt gebruikt.

5.3 Op passagiersschepen gebouwd op of na 1 juli 1997:

.1 moet het scheepsomroepsysteem ten minste twee circuits hebben die over hun gehele lengte voldoende gescheiden zijn, alsmede twee aparte en onafhankelijke versterkers; en

.2 moeten het scheepsomroepsysteem en de functioneringsnormen daarvan zijn goedgekeurd door de Administratie, met inachtneming van de door de Organisatie aangenomen aanbevelingen.

5.4 Het scheepsomroepsysteem moet zijn aangesloten op de noodenergiebron vereist door voorschrift II-1/42.2.2.

5.5 Op schepen gebouwd vóór 1 juli 1997 die reeds zijn uitgerust met een door de Administratie goedgekeurd scheepsomroepsysteem dat in hoofdlijnen voldoet aan de in de paragrafen 5.2 en 5.4 van deze bijlage en paragraaf 7.2.2.1 van de Code bedoelde systemen, hoeft het systeem niet te worden aangepast.

Voorschrift 7

Persoonlijke reddingsmiddelen

1 Reddingsboeien

1.1 Reddingsboeien die voldoen aan de vereisten van paragraaf 2.1.1 van de Code moeten:

.1 zo zijn verdeeld dat zij aan beide zijden van het schip en, voor

zover praktisch uitvoerbaar, op alle open dekken die tot aan de zijden van het schip doorlopen bedrijfsklaar beschikbaar zijn; ten minste één reddingsboei moet in de nabijheid van de achtersteven zijn geplaatst; en

.2 zo zijn geplaatst dat zij snel losgegooid kunnen worden en niet op een of andere manier permanent zijn vastgezet.

1.2 Aan iedere zijde van het schip moet ten minste één reddingsboei zijn voorzien van een drijvende reddingslijn die voldoet aan de vereisten van paragraaf 2.1.4 van de Code, met een lengte van ten minste tweemaal de hoogte waarop deze geplaatst is boven de waterlijn in ballasttoestand of 30 m, welke van beide het grootste is.

1.3 Ten minste de helft van het totaal aantal reddingsboeien moet zijn voorzien van een zelf-ontbrandend licht dat voldoet aan de vereisten van paragraaf 2.1.2 van de Code; ten minste twee daarvan moeten bovendien zijn voorzien van een zelfwerkend rooksignaal overeenkomstig de vereisten van paragraaf 2.1.3 van de Code en moeten vanaf de brug snel ontkoppeld kunnen worden; reddingsboeien met lichten en die met lichten en rooksignalen moeten gelijkelijk zijn verdeeld over beide zijden van het schip en mogen niet de reddingsboeien zijn met reddingslijnen overeenkomstig de vereisten van paragraaf 1.2.

1.4 Op iedere reddingsboei moet de naam en de thuishaven van het schip waarop de boei is geplaatst in hoofdletters in Romeins schrift zijn aangegeven.

2 Reddingsgordels

2.1 Voor alle opvarenden moet een reddingsgordel die voldoet aan de vereisten van paragraaf 2.2.1 of 2.2.2 van de Code aan boord zijn; bovendien moeten er zijn:

.1 een aantal reddingsgordels geschikt voor kinderen, gelijk aan ten minste 10% van het aantal passagiers aan boord of dat grotere aantal dat voorgeschreven kan worden om een reddingsgordel per kind te verstrekken; en

.2 een voldoende aantal reddingsgordels voor de wachtdoende bemanningsleden en voor gebruik op ver verwijderde plaatsen van reddingsboten en -vloten. De reddingsgordels voor de wachtdoende bemanningsleden moeten zijn opgeslagen op de brug, de machinebedieningskamer en op elk ander bemand wachtstation.

2.2 De reddingsgordels moeten zo zijn geplaatst dat ze gemakkelijk bereikbaar zijn en hun bergplaats moet duidelijk aangegeven zijn. Wanneer, vanwege de bijzondere indeling van het schip, de reddingsgordels voorgeschreven ingevolge de vereisten van paragraaf 2.1 onbereikbaar zouden worden, moeten andere maatregelen ten genoegen van de Administratie worden genomen welke kunnen inhouden dat het aantal reddingsgordels wordt vergroot.

2.3 De reddingsgordels die worden gebruikt in geheel overdekte reddingsboten, behalve reddingsboten die door middel van vrije val te water

worden gelaten, mogen de toegang tot de reddingsboot of zitplaatsen en het gebruik van de veiligheids gordels in de reddingsboot niet belemmeren.

2.4 De reddingsgordels die zijn gekozen voor reddingsboten die door middel van vrije val te water worden gelaten en de manier waarop deze aan boord zijn geplaatst of worden gedragen mogen geen belemmering vormen voor de toegang tot de reddingsboot, de veiligheid van de opvarenden of het gebruik van de reddingsboot.

3 Overlevingspakken en beschermende kleding tegen afkoeling

Voor alle personen die zijn aangewezen om de hulpverleningsboot te bemannen of die zijn toegewezen aan het mariene evacuatiesysteem, moet er een overlevingspak of beschermende kleding tegen afkoeling van de juiste maat zijn dat respectievelijk die voldoet aan de vereisten van sectie 2.3 van de Code respectievelijk de vereisten van sectie 2.4 van de Code. Indien het schip voortdurend reizen maakt in gebieden met een warm klimaat waar bescherming tegen warmteverlies, naar het oordeel van de Administratie, niet nodig is, hoeft deze beschermende kleding niet aan boord te zijn.

Voorschrift 8

Verlaatrol en aanwijzingen voor noodgevallen

1 Dit voorschrift is van toepassing op alle schepen.

2 Aan alle opvarenden moeten duidelijke aanwijzingen, die in geval van nood moeten worden gevolgd, worden verstrekt. In geval van passagiersschepen moeten deze instructies zijn opgesteld in de taal of talen die wordt respectievelijk worden vereist door de vlaggestaat van het schip en in de Engelse taal.

3 Op in het oog vallende plaatsen in het schip, met inbegrip van de brug, de machinekamer en bemanningsverblijven, moeten exemplaren van de verlaatrol, die voldoen aan het bepaalde van voorschrift 37, zijn opgehangen.

4 Afbeeldingen en aanwijzingen in geschikte talen moeten zijn aangebracht in de passagiershutten en duidelijk zichtbaar worden opgehangen op de verzamelplaatsen en in andere passagiersruimten teneinde de passagiers in te lichten omtrent:

- .1 hun verzamelplaats;
- .2 de noodzakelijke handelingen die zij in geval van nood moeten verrichten; en
- .3 hoe men een reddingsgordel aantrekt.

Voorschrift 9

Bedieningsaanwijzingen

1 Dit voorschrift is van toepassing op alle schepen.

2 Op of nabij de reddingsboten en -vloten en de bedieningsplaatsen van de tewaterlatingsmiddelen moeten instructieplaten of aanduidingen zijn aangebracht die:

- .1 het doel van de bedieningsmiddelen, de volgorde van behandeling van het toestel en desbetreffende instructies of waarschuwingen aangeven;
- .2 gemakkelijk zichtbaar zijn bij het licht van de noodverlichting; en
- .3 gebruik maken van symbolen overeenkomstig de aanbevelingen van de Organisatie.

Voorschrift 10

Bezetting van reddingsboten en -vloten en het toezicht daarop

1 Dit voorschrift is van toepassing op alle schepen.

2 Er moet een voldoende aantal geoefende bemanningsleden aan boord zijn om de verlaatrol te leiden en om ongeoefende personen bijeen te brengen en behulpzaam te zijn.

3 Er moet een voldoende aantal bemanningsleden aan boord zijn, stuurlieden danwel sloepgasten, om de reddingsboten en -vloten en de tewaterlatingsvoorzieningen, die vereist zijn om alle opvarenden te kunnen ontschepen, te bedienen.

4 Een stuurman of een sloepgast moet de leiding hebben over elke te gebruiken reddingsboot respectievelijk elk te gebruiken reddingsvlot. Rekening houdend met de aard van de reis, het aantal opvarenden en het soort schip kan de Administratie evenwel toestaan dat personen met ervaring in de behandeling en bediening van reddingsvloten, de leiding in die reddingsvloten krijgen toegewezen in plaats van de bovengenoemde gekwalificeerde personen. Tevens dient in het geval van reddingsboten een plaatsvervanger te worden aangewezen.

5 Degene die de leiding heeft over een reddingsboot of -vlot moet beschikken over een lijst met namen van de bemanningen voor reddingsboten en -vloten en moet erop toezien dat de hem toegewezen bemanningsleden hun taken kennen. In reddingsboten moet de plaatsvervangende sloepscommandant ook een lijst van de reddingsbootbemanning hebben.

6 Voor iedere motor-reddingsboot respectievelijk ieder motor-reddingsvlot moet iemand die de motor kan bedienen en kleine herstellingen kan verrichten, zijn aangewezen.

7 De kapitein moet ervoor zorgen dat het aantal personen bedoeld in de paragrafen 2, 3 en 4 op evenwichtige wijze over de reddingsboten en -vloten wordt verdeeld.

Voorschrift 11

Verzamel- en inschepingsvoorzieningen voor reddingsboten en -vloten

1 Reddingsboten en reddingsvloten waarvoor goedgekeurde tewaterlatingsmiddelen zijn voorgeschreven, moeten zo dicht mogelijk bij de ruimten voor accommodatie en dienstruimten zijn geplaatst.

2 De verzamelplaatsen moeten dicht bij de inschepingsplaatsen zijn. Elke verzamelplaats moet voldoende ruimte aan dek hebben om alle daarvoor aangewezen personen te kunnen bevatten, maar ten minste 0,35 m² per persoon.

3 Verzamel- en inschepingsplaatsen moeten gemakkelijk toegankelijk zijn vanuit de ruimten voor accommodatie en werkruimten.

4 Verzamel- en inschepingsplaatsen moeten voldoende verlicht worden; deze verlichting moet worden geleverd door de elektrische noodkrachtbron vereist in voorschrift II-1/42 of II-1/43, naar gelang van toepassing.

5 Gangen, trappen en uitgangen die toegang geven tot de verzamel- en inschepingsplaatsen moeten zijn verlicht. Deze verlichting moet kunnen worden geleverd door de elektrische noodkrachtbron vereist in voorschrift II-1/42 of II-1/43, naar gelang van toepassing. Ter aanvulling op en als onderdeel van de markeringen vereist in voorschrift II-2/28.1.10, moeten routes naar de verzamelplaatsen worden gemarkeerd met verzamelplaatssymbolen bedoeld voor dat doel, overeenkomstig de aanbevelingen van de Organisatie.

6 Verzamel- en inschepingsplaatsen voor strijkbare reddingsboten en -vloten en voor reddingsboten en -vloten die door middel van vrije val te water worden gelaten moeten zo zijn ingericht dat het mogelijk is een gewonde op een draagbaar in de reddingsboot of op het reddingsvlot te plaatsen.

7 Op iedere inschepingsplaats of op ieder paar naast elkaar gelegen inschepingsplaatsen moet een inschepingsladder zijn die voldoet aan de vereisten van paragraaf 6.1.6 van de Code, bestaande uit één lengte die onder ongunstige omstandigheden van kop- of stuurlast van maximaal 10° en met een slagzij van maximaal 20° naar iedere zijde, vanaf het dek bij de geringste diepgang reikt naar reddingsboten en -vloten die aan de zijde van het schip te water zijn gelaten. De Administratie kan echter toestaan dat dergelijke ladders worden vervangen door goedgekeurde middelen om toegang te verschaffen tot de reddingsboten en -vloten wanneer deze in het water liggen, op voorwaarde dat er tenminste één inschepingsladder aan iedere kant van het schip is. Voor de reddingsvloten vereist in voorschrift 31.1.4 kunnen andere middelen voor ordelijke inscheping worden toegestaan.

8 Waar nodig moeten middelen aanwezig zijn om de strijkbare reddingsboten en -vlotten tegen scheepsboord te brengen en daar te houden opdat personen veilig kunnen inschepen.

Voorschrift 12

Tewaterlatingsplaatsen

Om een veilige tewaterlating te waarborgen, moet de opstelling van de tewaterlatingsplaatsen zodanig zijn dat bijzondere aandacht wordt geschonken aan de afstand tot de schroef en de sterk uitstekende gedeelten van de romp en dat de reddingsboten en -vlotten, behalve reddingsboten en -vlotten speciaal ontworpen voor tewaterlating door middel van vrije val, zoveel mogelijk langs het verticale gedeelte van de zijde van het schip afgevierd kunnen worden. Bij plaatsing op het voorschip moeten zij op een beschermde plaats achter het aanvaringsschot zijn opgesteld en, in dit verband, moet de Administratie bijzondere aandacht schenken aan de sterkte van het tewaterlatingsmiddel.

Voorschrift 13

Plaatsing van reddingsboten en -vlotten

1 Iedere reddingsboot respectievelijk ieder reddingsvlot moet worden geplaatst:

- .1 zodanig dat noch de reddingsboot respectievelijk het reddingsvlot noch de plaatsingsvoorzieningen de werking van enige andere reddingsboot of enig ander reddingsvlot of hulpverleningsboot op een andere tewaterlatingsplaats belemmeren;
- .2 zo laag mogelijk boven het wateroppervlak als veilig en uitvoerbaar is en in het geval van een reddingsboot of -vlot, anders dan een werpreddingsvlot, op een zodanige plaats dat de reddingsboot of het reddingsvlot op een inschepingsplaats komt van niet minder dan 2 m boven de waterlijn van het schip in geladen toestand, onder ongunstige omstandigheden van kop- of stuurlast tot 10° en een slagzij tot 20° naar iedere kant of tot die hoek waarbij de rand van het bovenste doorlopende dek onder water raakt, welk van beide het kleinste is;
- .3 zodat de reddingsboot of het reddingsvlot voortdurend bedrijfsklaar is zodat twee bemanningsleden het vaartuig binnen 5 minuten voor inschepen en te water laten kunnen klaarmaken.
- .4 zodat het vaartuig volledig uitgerust is als voorgeschreven in dit hoofdstuk en de Code; en
- .5 voor zover uitvoerbaar, in een voor schade door brand en explosie veilige en beschermde plaats. In het bijzonder reddingsboten en -vlotten op tankschepen, anders dan de reddingsvlotten vereist in voorschrift 31.1.4, mogen niet geplaatst zijn op of

boven een ladingtank, sloptank of andere tank die ontplofbare of gevaarlijke lading bevat.

2 Reddingsboten die langs de scheepzijde moeten worden gevierd, moeten zo ver mogelijk voor de schroef worden geplaatst. Op vrachtschepen van 80 m lengte en meer doch minder dan 120 m lengte moet iedere reddingsboot zo worden geplaatst, dat de achterkant van de reddingsboot ten minste de reddingsbootlengte voor de schroef heeft. Op vrachtschepen van 120 m lengte en meer en op passagiersschepen van 80 m lengte en meer moet iedere reddingsboot zo worden geplaatst, dat de achterkant van de reddingsboot niet minder dan anderhalf maal de reddingsbootlengte voor de schroef heeft. Waar toepasselijk moet het op het schip zo worden ingedeeld dat de reddingsboten op hun opstellingsplaatsen beschermd zijn tegen schade door overkomend water.

3 Reddingsboten moeten zijn opgesteld verbonden met de tewaterlatingsmiddelen.

4.1 Elk reddingsvlot moet zijn geplaatst met zijn vanglijn permanent bevestigd aan het schip.

4.2 Elk reddingsvlot of elke groep reddingsvloten moet zijn geplaatst met een voorziening voor vrij opdrijven die voldoet aan de vereisten van paragraaf 4.1.6 van de Code en wel zo dat wanneer het schip zinkt het reddingsvlot vrij opdrijft en, indien opblaasbaar, automatisch wordt opgeblazen.

4.3 Reddingsvloten moeten zodanig worden geplaatst dat het mogelijk is met de hand één vlot of verpakking tegelijk van zijn sjorringen te ontdoen.

4.4 De paragrafen 4.1 en 4.2 zijn niet van toepassing op de reddingsvloten vereist in voorschrift 31.1.4.

5 Strijkbare reddingsvloten moeten binnen bereik van hijshaken worden geplaatst, tenzij er overbrengingsmiddelen zijn aangebracht die niet buiten werking raken binnen de gestelde normen van kop- of stuurlast en slagzij zoals omschreven in paragraaf 1.2 of door de scheepsbeweging of door het uitvallen van de elektriciteit.

6 Werpreddingsvloten moeten klaar voor overbrenging voor het te water laten aan iedere zijde van het schip worden opgesteld, tenzij de reddingsvloten met de gezamenlijke capaciteit die in voorschrift 31.1 is voorgeschreven, om aan beide zijden te water gelaten te kunnen worden, aan beide zijden van het schip geplaatst zijn.

Voorschrift 14

Plaatsing van hulpverleningsboten

Hulpverleningsboten moeten worden geplaatst:

- .1 zodat ze voortdurend bedrijfsklaar zijn voor tewaterlating in niet meer dan 5 minuten;

- .2 op een plaats die geschikt is voor het te water laten en het terugplaatsen;
- .3 zodanig dat noch de hulpverleningsboten noch de plaatsingsvoorzieningen de werking van een reddingsboot of -vlot op een andere tewaterlatingsplaats belemmeren;
- .4 overeenkomstig de bepalingen van voorschrift 13, indien ze tevens reddingsboot zijn.

Voorschrift 15

Plaatsing van mariene evacuatiesystemen

1 In de scheepszijde mogen geen openingen zijn tussen de inschepingsplaats van het mariene evacuatiesysteem en de waterlijn in ballasttoestand en voorzieningen moeten zijn getroffen om het systeem te beschermen tegen uitstekende delen.

2 Om veilige tewaterlating te waarborgen, moet de opstelling van mariene evacuatiesystemen zodanig zijn dat bijzondere aandacht wordt geschonken aan de afstand tot de schroef en de sterk uitstekende gedeelten van de romp en dat het systeem zoveel mogelijk langs het verticale gedeelte van de zijde van het schip afgevierd kan worden.

3 De plaatsing van elk marien evacuatiesysteem moet zodanig zijn dat noch de vrije doorgang, noch het platform, noch de plaatsing of de bedieningsvoorzieningen ervan de werking van enig ander reddingsmiddel op een andere tewaterlatingsplaats belemmeren;

4 Waar toepasselijk moet het op het schip zo worden ingedeeld dat de mariene evacuatiesystemen op hun opstellingsplaatsen beschermd zijn tegen schade door overkomend water.

Voorschrift 16

Voorzieningen voor tewaterlating en terugzetten van reddingsboten en -vloten

1 Tenzij uitdrukkelijk anders bepaald, moeten tewaterlatingsmiddelen en inschepingsvoorzieningen die voldoen aan de vereisten van deel 6.1 van de Code beschikbaar zijn voor alle reddingsboten en -vloten behalve voor:

- .1 reddingsboten en -vloten waarin wordt ingescheept vanaf een plaats aan dek op minder dan 4,5 m boven de waterlijn in ballasttoestand en die een gewicht hebben van niet meer dan 185 kg; of
- .2 reddingsboten en -vloten waarin wordt ingescheept vanaf een plaats aan dek op minder dan 4,5 m boven de waterlijn in ballasttoestand en die geplaatst zijn voor het rechtstreeks te water laten vanaf de opstellingsplaats onder ongunstige omstan-

- digheden van kop- of stuurlast tot 10° en met een slagzij tot 20° naar iedere kant; of
- .3 reddingsboten en -vlotten die aan boord zijn boven de reddingsboten en -vlotten ten behoeve van 200% van het aantal opvarenden en die een gewicht hebben van niet meer dan 185 kg.; of
 - .4 reddingsboten en -vlotten die aan boord zijn boven de reddingsboten en -vlotten ten behoeve van 200% van het aantal opvarenden en die geplaatst zijn voor het rechtstreeks te water laten vanaf de opstellingsplaats onder ongunstige omstandigheden van kop- of stuurlast tot 10° en met een slagzij van niet meer dan 20° naar iedere kant, of
 - .5 reddingsboten en -vlotten die aan boord zijn voor gebruik in combinatie met een marien evacuatiesysteem dat voldoet aan de vereisten van sectie 6.2 van de Code en is geplaatst voor het rechtstreeks te water laten vanaf de opstellingsplaats onder ongunstige omstandigheden van kop- of stuurlast tot 10° en met een slagzij tot 20° naar iedere kant.

2 Elke reddingsboot moet zijn voorzien van een middel dat de reddingsboot te water kan laten en weer terug kan zetten. Bovendien moet er een voorziening zijn om de reddingsboot vrij te laten hangen om het ontkoppelingssysteem vrij te maken voor onderhoud.

3 De middelen voor het te water laten en terugzetten moeten zo zijn uitgevoerd dat de bediener daarvan in staat is te allen tijde de reddingsboot of het reddingsvlot bij het te water laten en voor de reddingsboten tevens bij het terugzetten, van boord af gade te slaan.

4 Voor gelijksoortige reddingsboten en -vlotten aan boord van een schip mag uitsluitend één type ontkoppelingsmechanisme worden gebruikt.

5 Het gereedmaken en bedienen van een reddingsboot of -vlot op een tewaterlatingsplaats mag het gereedmaken en bedienen van andere reddingsboten en -vlotten of hulpverleningsboten op andere tewaterlatingsplaatsen niet belemmeren;

6 Lopers, waar toegepast, moeten lang genoeg zijn om met de reddingsboten en -vlotten het water te kunnen bereiken vanaf het schip in ballasttoestand onder ongunstige omstandigheden van kop- of stuurlast tot 10° en een slagzij van niet meer dan 20° naar iedere kant.

7 Gedurende het klaarmaken en te water laten moeten de reddingsboot of het reddingsvlot, het daarbij behorende tewaterlatingsmiddel en de omgeving van het wateroppervlak waarin deze respectievelijk dit zal worden afgevierd voldoende verlicht worden met licht dat geleverd wordt door de elektrische noodkrachtbron vereist in Voorschrift II-1/42 of II-1/43, naar gelang van toepassing.

8 Er moeten middelen beschikbaar zijn om te voorkomen dat waterlozing op de reddingsboten en -vloten plaatsvindt gedurende 'schip verlaten'.

9 Wanneer het gevaar bestaat dat de reddingsboten en -vloten beschadigd zullen worden door de vleugels van de scheepsstabilisatoren, moeten er middelen beschikbaar zijn, gevoed door een noodkrachtbron, om die vleugels binnenboord te brengen; op de brug moet een aanwijzer bekrachtigd door een noodkrachtbron beschikbaar zijn om de stand van de stabilisatorvleugels aan te geven.

10 Indien gedeeltelijk overdekte reddingsboten die voldoen aan de vereisten van hoofdstuk 4.5 van de Code aan boord zijn, dan dient een middenleider tussen de davitkoppen te zijn aangebracht voorzien van niet minder dan twee reddingslijnen die lang genoeg zijn om tot op het water te reiken met het schip in ballasttoestand onder ongunstige omstandigheden van kop- of stuurlast tot 10° en met een slagzij tot 20° naar iedere kant.

Voorschrift 17

Voorzieningen voor inscheping in, tewaterlating en terugzetten van hulpverleningsboten

1 De voorzieningen voor inscheping in en tewaterlating van hulpverleningsboten moeten zo zijn uitgevoerd dat in de kortst mogelijke tijd in de hulpverleningsboot kan worden ingescheept en deze te water kan worden gelaten.

2 Indien de hulpverleningsboot een van de reddingsboten en -vloten van het schip is, moeten de inschepingsvoorzieningen en de tewaterlatingsplaats voldoen aan de bepalingen van de voorschriften 11 en 12.

3 De tewaterlatingsvoorzieningen moeten voldoen aan de bepalingen van voorschrift 16. Alle hulpverleningsboten moeten echter te water gelaten kunnen worden, waar nodig met gebruikmaking van een vanglijn, terwijl het schip met een snelheid tot 5 knopen in kalm water voortvaart.

4 Het terugzetten van de hulpverleningsboot mag niet langer duren dan 5 min bij kalme zee en beladen met de volledige bezetting en de volledige uitrusting. Indien de hulpverleningsboot tevens reddingsboot is, moet deze binnen deze tijd kunnen worden teruggezet met de boot die beladen is met de uitrusting van de reddingsboot en de goedgekeurde bezetting van de hulpverleningsboot van ten minste 6 personen.

5 De voorzieningen voor het inschepen in en terugzetten van hulpverleningsboten moeten het veilig en efficiënt gebruik van een draagbaar mogelijk maken. Zwaarweerhijsstroppen moeten aanwezig zijn ter wille van de veiligheid indien zware hijsblokken een gevaar vormen.

Voorschrift 18

Lijnwerptoestellen

Een lijnwerptoestel dat voldoet aan de vereisten van deel 7.1 van de Code moet aan boord zijn.

Voorschrift 19

Instructies en oefeningen voor noodgevallen

1 Dit voorschrift is van toepassing op alle schepen.

2 Vertrouwdheid met de veiligheidsvoorzieningen en verlaatrollen

2.1 Ieder bemanningslid aan wie taken in noodsituaties zijn opgedragen moet vertrouwd zijn met deze taken voordat de reis begint.

2.2 Aan boord van een schip dat een reis maakt waarbij de passagiers volgens planning meer dan 24 uur aan boord blijven, moet de verlaatrol voor de passagiers binnen 24 uur na inscheping plaatsvinden. De passagiers moeten worden voorgelicht over het gebruik van reddingsgordels en de te verrichten handelingen in geval van nood.

2.3 Steeds wanneer nieuwe passagiers inschepen, moeten de passagiers direct vóór of na vertrek veiligheidsinstructies krijgen. De uitleg moet de instructies omvatten die worden vereist door de voorschriften 8.2 en 8.4 en plaatsvinden door middel van een oproep in één of meer talen waarvan het waarschijnlijk is dat zij worden verstaan door de passagiers. De oproep moet worden gedaan via het scheepsomroepsysteem of een vergelijkbaar middel dat waarschijnlijk wordt gehoord door ten minste de passagiers die de oproep nog niet eerder hebben gehoord tijdens de reis. De uitleg kan worden opgenomen in de verlaatrol vereist door paragraaf 2.2, indien de verlaatrol direct na vertrek plaatsvindt. Instructiekaarten of -platen of videoprogramma's die worden vertoond op de videoschermen van het schip kunnen worden gebruikt ter aanvulling op de uitleg, maar zij mogen niet worden gebruikt als vervanging van de oproep.

3 Oefeningen

3.1 Voor zover uitvoerbaar moeten de oefeningen worden uitgevoerd alsof er een daadwerkelijke noodsituatie heerst.

3.2 Ieder bemanningslid moet aan ten minste één verlaatrol en één brandrol in de maand deelnemen. De oefeningen voor de bemanning moeten plaatsvinden binnen 24 uur nadat het schip een haven heeft verlaten wanneer meer dan 25% van de bemanning in de voorafgaande maand niet heeft deelgenomen aan verlaat- en brandrollen aan boord van het desbetreffende schip. Wanneer een schip voor het eerst in de vaart wordt genomen, een grote wijziging heeft ondergaan of nadat een nieuwe bemanning is aangesteld, moeten deze oefeningen vóór vertrek plaatsvinden. De Administratie kan andere regelingen die ten minste gelijkwaardig zijn, aanvaarden voor die soorten schepen waarvoor deze onuitvoerbaar zijn.

3.3 Oefening schip-verlaten

3.3.1 Iedere oefening schip-verlaten moet omvatten:

- .1 het oproepen van passagiers en bemanning naar hun verzamelplaatsen door middel van het alarmsysteem vereist in voorschrift 6.4.2, gevolgd door een aankondiging van de oefening via het scheepsomroepsysteem of een ander communicatiesysteem en het zich ervan verzekeren dat zij op de hoogte zijn gebracht van de gang van zaken bij het schip-verlaten, zoals vermeld in de verlaatrol;
- .2 het melden bij de verzamelplaatsen en het voorbereiden op de taken genoemd in de verlaatrol;
- .3 controle op de passende kleding van passagiers en bemanning;
- .4 controle of de reddingsgordels goed zijn aangetrokken;
- .5 het afvieren van ten minste één reddingsboot nadat deze voor het afvieren gereed is gemaakt;
- .6 het starten en laten draaien van de reddingsbootmotor;
- .7 het bedienen van de kranen voor de strijkbare reddingsvloten;
- .8 een oefening met het opsporen en redden van passagiers die vastzitten in hun hutten; en
- .9 instructies voor het gebruik van radiomiddelen voor redding.

3.3.2 Voor zover uitvoerbaar moeten bij achtereenvolgende oefeningen verschillende reddingsboten worden afgevierd overeenkomstig het bepaalde in paragraaf 3.3.1.5.

3.3.3 Behalve in situaties omschreven in de paragrafen 3.3.4 en 3.3.5, moet iedere reddingsboot ten minste eenmaal in de drie maanden tijdens een verlaatrol met de voor de bediening aangewezen bemanning aan boord te water worden gelaten en moet er mee worden gemanoeuvreerd.

3.3.4 Het afvieren in plaats van te water laten van een reddingsboot die bedoeld is voor tewaterlating door middel van vrije val wordt toegestaan indien tewaterlating door middel van vrije val onuitvoerbaar is, op voorwaarde dat de reddingsboot éénmaal per zes maanden met de aangewezen bemanning aan boord te water wordt gelaten door middel van vrije val en ermee wordt gemanoeuvreerd in het water. In gevallen waarin dit onuitvoerbaar is, kan de Administratie deze periode echter verlengen tot 12 maanden, mits er voorzieningen worden getroffen voor een gesimuleerde tewaterlating, die met tussenpozen van maximaal 6 maanden zal plaatsvinden.

3.3.5 Voor schepen die korte internationale reizen maken kan de Administratie toestaan om de reddingsboten aan één zijde niet te water te laten wanneer de ligplaatsvoorzieningen in de haven en het vaarpatroon het te water laten aan die zijde niet mogelijk maken. Al deze reddingsboten moeten echter ten minste eenmaal per drie maanden afgevierd en jaarlijks te water gelaten worden.

3.3.6 Voor zover dat redelijk en uitvoerbaar is moeten hulpverleningsboten, anders dan reddingsboten die tevens hulpverleningsboten zijn, iedere maand met hun aangewezen bemanning te water worden gelaten en moet er mee worden gemanoeuvreerd in het water. In ieder geval

moet ten minste eenmaal in de drie maanden aan deze eis worden voldaan.

3.3.7 Indien oefeningen met het te water laten van de reddingsboot en hulpverleningsboot worden gehouden met een vaartlopend schip, dan moeten deze oefeningen in verband met de gevaren die daaraan verbonden zijn uitsluitend worden uitgevoerd in beschut water en onder toezicht staan van een officier met ervaring in dergelijke oefeningen.

3.3.8 Indien een schip is uitgerust met mariene evacuatiesystemen, moeten de oefeningen de uitvoering van de procedures omvatten voor het gebruik van een dergelijk systeem tot aan het moment dat direct voorafgaat aan het daadwerkelijk gebruik van het systeem. Dit aspect van oefeningen moet worden aangevuld met regelmatige instructies met behulp van de hulpmiddelen voor oefeningen aan boord vereist in voorschrift 35.4. Bovendien moet elk lid van de bemanning van het systeem, voor zover uitvoerbaar, verder worden getraind door middel van deelname in een oefening waarbij een vergelijkbaar systeem volledig wordt gebruikt in het water, hetzij aan boord van een schip hetzij op de wal, met tussenpozen van niet langer dan twee jaar, maar in geen geval langer dan drie jaar. Deze training kan worden gecombineerd met de oefeningen vereist in voorschrift 20.8.2.

3.3.9 De noodverlichting ten behoeve van het verzamelen en het schip-verlaten moet bij iedere verlaatrol worden beproefd.

3.4 Brandrol

3.4.1 Oefeningen in het blussen van brand moeten op zodanige wijze worden gepland dat voldoende rekening wordt gehouden met de gebruikelijke praktijk in de verschillende noodsituaties die zich kunnen voordoen afhankelijk van het type schip en de lading.

3.4.2 Iedere brandrol moet omvatten:

- .1 het melden bij de verzamelplaatsen en het voorbereiden op de taken genoemd in de verlaatrol vereist in voorschrift 8;
- .2 het in werking stellen van een brandpomp met gebruikmaking van ten minste de twee vereiste waterstralen om aan te tonen dat het systeem in goede staat is voor gebruik;
- .3 het controleren van de brandweeruitrustingen en andere persoonlijke reddingsuitrusting;
- .4 het controleren van de desbetreffende communicatieapparatuur;
- .5 het controleren van de werking van waterdichte deuren, branddeuren, brandkleppen en hoofd- en uitlaten van ventilatiesystemen in het gebied waar de oefeningen plaatsvinden; en
- .6 het controleren van de nodige voorzieningen voor het vervolgens verlaten van het schip.

3.4.3 De uitrusting die gedurende oefeningen wordt gebruikt moet onmiddellijk weer in volledig gebruiksklare staat worden gebracht, en mankementen en storingsen die tijdens de oefeningen worden geconstateerd, moeten zo snel mogelijk worden verholpen.

4 Oefening en instructie aan boord

4.1 De oefening aan boord in het gebruik van de reddingsmiddelen van het schip, met inbegrip van de uitrusting van de reddingsboten en -vloten, en in het gebruik van de brandblusmiddelen, moet zo snel mogelijk worden gegeven echter uiterlijk 2 weken nadat een bemanningslid aan boord is gekomen. Wanneer echter het bemanningslid op een regelmatig aflosschema aan boord is geplaatst, moet deze opleiding worden gegeven binnen 2 weken nadat hij voor het eerst aan boord is gekomen. Met dezelfde tussenpozen als de oefeningen moet instructie in het gebruik van de brandblusmiddelen en reddingsmiddelen van het schip en het overleven op zee worden gegeven. Individuele instructie kan verschillende onderdelen van de reddings- en brandblusmiddelen van het schip omvatten, maar alle reddings- en brandblusmiddelen van het schip moeten binnen een tijdsbestek van 2 maanden zijn behandeld.

4.2 Ieder bemanningslid moet instructie krijgen die ten minste bestaat uit:

- .1 bediening en gebruik van opblaasbare reddingsvloten van het schip;
- .2 problemen in verband met hypothermie, eerste hulp bij hypothermie en andere toepasselijke handelingen van eerste hulp;
- .3 bijzondere instructies die nodig zijn voor het gebruik van de reddingsmiddelen van het schip bij zwaar weer en hoge zeeën; en
- .4 bediening en gebruik van brandblusmiddelen.

4.3 Oefeningen aan boord in het gebruik van strijkbare reddingsvloten op schepen die met dergelijke middelen zijn uitgerust, moeten met tussenpozen van niet meer dan 4 maanden plaatsvinden. Wanneer uitvoerbaar moeten deze het opblazen en het afvieren van een reddingsvlot omvatten. Het reddingsvlot kan een speciaal reddingsvlot zijn dat uitsluitend bestemd wordt voor oefeningen en dat geen deel uitmaakt van de reddingsmiddelen van het schip; een dergelijk speciaal reddingsvlot moet duidelijk als zodanig gemerkt zijn.

5 Aantekening

De data waarop oefeningen worden gehouden, bijzonderheden van de verlaat- en brandrol, oefeningen met andere reddingsmiddelen en opleiding aan boord moeten in het daarvoor door de Administratie voorgescreven logboek, worden opgetekend. Wanneer een volledige verlaatrol, oefening of instructie niet op de vastgestelde tijd plaatsvindt, dan moet dat worden opgetekend in het logboek, waarbij moet worden vermeld onder welke omstandigheden en in welke mate de rol, oefening of instructie wel is gehouden.

Voorschrift 20

Gereedheid voor gebruik, onderhoud en inspecties

1 Dit voorschrift is van toepassing op alle schepen. Aan de vereisten

van de paragrafen 3 en 6.2 moet, voor zover uitvoerbaar, worden vol-
daan op schepen gebouwd vóór 1 juli 1986.

2 Gereedheid voor gebruik

Voordat het schip de haven verlaat en gedurende de gehele reis moe-
ten alle reddingsmiddelen in goede staat verkeren en voor onmiddellijk
gebruik gereed zijn.

3 Onderhoud

3.1 Er moeten instructies zijn zoals omschreven in voorschrift 36 ten
aanzien van het onderhoud van de reddingsmiddelen aan boord en het
onderhoud moet dienovereenkomstig worden uitgevoerd.

3.2 In plaats van de in paragraaf 3.1 voorgeschreven instructies kan
de Administratie een voor het schip opgesteld onderhoudsprogramma
aanvaarden, waarin de vereisten van voorschrift 36 zijn opgenomen.

4 Onderhoud van de lopers

4.1 Lopers die bij het afvieren worden gebruikt, moeten met tussen-
pozen van niet meer dan 30 maanden eind voor eind gekeerd worden en
moeten worden vernieuwd wanneer ze gebreken vertonen dan wel na ten
hoogste 5 jaar, welke van beide termijnen het kortst is.

4.2 De Administratie kan in plaats van het eind-voor-eind keren ver-
eist in paragraaf 4.1, periodieke inspectie en vernieuwing bij gebreken
van de lopers of met tussenpozen van ten hoogste 4 jaar aanvaarden,
welke van beide termijnen het kortst is.

5 Reserveonderdelen en reparatiegereedschap

Er moeten reserveonderdelen en reparatiegereedschap zijn voor de
reddingsmiddelen en hun bestanddelen die onderhevig zijn aan uitzon-
derlijke slijtage of vertering en regelmatig moeten worden vervangen.

6 Wekelijkse inspectie

De volgende beproevingen en inspecties moeten wekelijks worden
uitgevoerd:

- .1 visuele inspectie van alle reddingsboten en -vloten,
hulpverleningsboten en tewaterlatingsmiddelen teneinde te ver-
zekeren dat deze gereed voor gebruik zijn;
- .2 de motoren in alle reddingsboten en hulpverleningsboten moe-
ten in totaal ten minste 3 minuten lopen, mits de omgevings-
temperatuur hoger is dan de minimumtemperatuur vereist om de
motor te kunnen starten en te laten lopen. Gedurende dit tijdvak
moet worden aangetoond dat de tandwielkast en tandwielover-
brenging naar behoren koppelen. Indien de specifieke kenmer-
ken van een buitenboordmotor die is geïnstalleerd op een red-
dingsboot niet toelaten dat men deze laat lopen anders dan met
de schroef in het water gedurende een periode van 3 minuten,
moet deze zolang lopen als voorgeschreven in het handboek van
de fabrikant. In bijzondere omstandigheden kan de Administra-
tie voor schepen gebouwd vóór 1 juli 1986 ontheffing van deze
bepaling verlenen; en

.3 beproeving van het systeem voor het geven van algemeen alarm.

7 Maandelijks inspectie

De inspectie van de reddingsmiddelen met inbegrip van de reddingsbootuitrusting moet maandelijks worden uitgevoerd waarbij gebruik moet worden gemaakt van de in voorschrift 36.1 vereiste controlelijst teneinde te verzekeren dat deze volledig zijn en in goede staat verkeren. Een verslag van de inspectie moet in het logboek worden opgenomen.

8 Herkeuring van opblaasbare reddingsvloten, opblaasbare reddingsgordels, mariene evacuatiesystemen en hulpverleningsboten in opgeblazen toestand

8.1 Ieder opblaasbaar reddingsvlot, iedere opblaasbare reddingsgordel en ieder marien evacuatiesysteem moet een herkeuring ondergaan:

- .1 met tussenpozen van ten hoogste 12 maanden. In gevallen waarin dit onuitvoerbaar is, kan de Administratie deze periode verlengen tot 17 maanden; en
- .2 in een goedgekeurd keuringsstation, dat bevoegd is deze herkeuring te verrichten, over passende keuringsvoorzieningen beschikt, en uitsluitend gebruik maakt van daartoe opgeleid personeel.

8.2 Afwisselend gebruik van mariene evacuatiesystemen

Aanvullend op of in combinatie met de onderhoudsperiodes voor mariene evacuatiesystemen vereist in paragraaf 8.1, moeten de mariene evacuatiesystemen van het schip afwisselend worden gebruikt met door de Administratie goed te keuren tussenpozen, op voorwaarde dat elk systeem ten minste eenmaal per zes jaar wordt gebruikt.

8.3 Een Administratie die nieuwe opblaasbare reddingsvlotvoorzieningen of opblaasbare reddingsvlotvoorzieningen van een nieuw ontwerp goedkeurt krachtens voorschrift 4, kan verlenging van de tussenpozen voor herkeuring toestaan onder de volgende voorwaarden:

8.3.1 Het is aangetoond dat de nieuwe reddingsvlotvoorziening of de reddingsvlotvoorziening van een nieuw ontwerp bij de verlengde tussenpozen voor herkeuring blijft voldoen aan dezelfde norm als vereist door de testprocedure.

8.3.2 Het reddingsvlotsysteem wordt aan boord gecontroleerd door bevoegd personeel overeenkomstig paragraaf 8.1.1.

8.3.3 Herkeuring met tussenpozen van ten hoogste 5 jaar moet plaatsvinden overeenkomstig de aanbevelingen van de Organisatie.

8.4 Alle reparaties en onderhoud aan hulpverleningsboten in opgeblazen toestand moeten worden uitgevoerd overeenkomstig de aanwijzingen van de fabrikant. Noodreparaties kunnen aan boord van het schip worden uitgevoerd; permanente reparaties echter moeten worden verricht in een goedgekeurd keuringsstation.

8.5 Een Administratie die verlenging van de tussenpozen voor her-

keuring van reddingsvloten overeenkomstig paragraaf 8.3 toestaat, moet de Organisatie daarvan op de hoogte stellen overeenkomstig voorschrift I/5(b).

9 Periodieke herkeuring van automatische hydrostatische ontkoppelingsmechanismen

De herkeuring van hydrostatische ontkoppelingsmechanismen anders dan voor eenmalige toepassing, moet worden verricht:

- .1 met tussenpozen van ten hoogste 12 maanden. In gevallen waarin dit onuitvoerbaar is, kan de Administratie deze periode verlengen tot 17 maanden; en
- .2 in een keuringsstation dat bevoegd is deze herkeuring te verrichten, over passende keuringsvoorzieningen beschikt, en uitsluitend gebruik maakt van daartoe opgeleid personeel.

10 Markering van plaatsingslocaties

Verpakkingen, beugels, rekken en vergelijkbare plaatsingslocaties voor reddingsmiddelen moeten zijn gemarkeerd met symbolen overeenkomstig de aanbevelingen van de Organisatie, die aangeven welke reddingsmiddelen zich voor dat doel op die locatie bevinden. Indien op een locatie meer dan één middel is geplaatst, moet tevens het aantal middelen worden aangegeven.

11 Periodieke herkeuring van tewaterlatingsmiddelen en belaste ontkoppelingssystemen

11.1 Tewaterlatingsmiddelen:

- .1 moeten herkeurd worden met de aanbevolen tussenpozen overeenkomstig de instructies voor onderhoud aan boord als vereist in voorschrift 36;
- .2 moeten worden onderworpen aan een grondige inspectie met tussenpozen van ten hoogste 5 jaar; en
- .3 moeten bij beëindiging van de inspectie genoemd onder .2 worden onderworpen aan een dynamische test van de lierrem overeenkomstig paragraaf 6.1.2.5.2 van de Code.

11.2 Belaste ontkoppelingssystemen van reddingsboten moeten:

- .1 worden herkeurd met de aanbevolen tussenpozen overeenkomstig de instructies voor onderhoud aan boord als vereist in voorschrift 36;
- .2 worden onderworpen aan een grondige inspectie en beproeving tijdens de onderzoeken vereist door de voorschriften I/7 en I/8 door daartoe opgeleid personeel dat vertrouwd is met het systeem; en
- .3 operationeel worden beproefd met een belasting van 1,1 maal het totale gewicht van de reddingsboot met aan boord de volledige bezetting aan personen en uitrusting wanneer het ontkoppelingssysteem wordt gereviseerd. Deze revisie en beproeving moet ten minste eenmaal per 5 jaar plaatsvinden.

AFDELING II

PASSAGIERSSCHEPEN (AANVULLENDE VEREISTEN)

Voorschrift 21

Reddingsboten en -vloten en hulpverleningsboten

1. Reddingsboten en -vloten

1.1 Passagiersschepen die internationale reizen maken die geen korte internationale reizen zijn, moeten aan boord hebben:

- .1 aan elke zijde gedeeltelijk of geheel overdekte reddingsboten die voldoen aan de vereisten van sectie 4.5 of 4.6 van de Code en die per zijde gezamenlijk voldoende ruimte bieden aan ten minste 50% van het totale aantal opvarenden. De Administratie kan toestaan dat reddingsboten worden vervangen door reddingsvloten met dezelfde totale capaciteit met dien verstande dat aan elke zijde van het schip nimmer minder reddingsboten mogen zijn geplaatst dan voldoende is om 37,5% van het totale aantal opvarenden op te nemen. De opblaasbare of vaste reddingsvloten moeten voldoen aan de vereisten van sectie 4.2 of 4.3 van de Code en moeten door tewaterlatingsmiddelen, gelijkmatig verdeeld over elke zijde van het schip worden bediend; en
- .2 bovendien opblaasbare of vaste reddingsvloten die voldoen aan de vereisten van sectie 4.2 of 4.3 van de Code met gezamenlijk voldoende ruimte voor ten minste 25% van het totale aantal opvarenden. Deze reddingsvloten moeten worden bediend door ten minste één tewaterlatingsmiddel aan elke zijde, waartoe die welke ingevolge paragraaf 1.1.1 aan boord moeten zijn, kunnen worden gerekend of door als gelijkwaardig goedgekeurde middelen die aan beide zijden kunnen worden gebruikt. De plaatsing van deze reddingsvloten behoeft echter niet te voldoen aan de vereisten van voorschrift 13.5.

1.2 Passagiersschepen die korte internationale reizen maken en voldoen aan de bijzondere vereisten voor waterdichte indeling voorgeschreven in voorschrift II-1/6.5 moeten aan boord hebben:

- .1 gedeeltelijk of geheel overdekte reddingsboten die voldoen aan vereisten van sectie 4.5 of 4.6 van de Code en die gezamenlijk voldoende ruimte bieden aan ten minste 30% van het totale aantal opvarenden. De reddingsboten moeten, voor zover uitvoerbaar, gelijkmatig zijn verdeeld over beide zijden van het schip. Bovendien moeten er opblaasbare of vaste reddingsvloten aan boord zijn die voldoen aan vereisten van sectie 4.2 of 4.3 van de Code en gezamenlijk voldoende ruimte bieden opdat te zamen met de capaciteit van de reddingsboten, de reddingsvloten voldoende ruimte bieden aan het totale aantal opvarenden.

De reddingsvloten moeten worden bediend door tewaterlatingsmiddelen die gelijkelijk zijn verdeeld over beide zijden van het schip; en

- .2 bovendien opblaasbare of vaste reddingsvloten die voldoen aan vereisten van sectie 4.2 of 4.3 van de Code met gezamenlijk voldoende ruimte voor ten minste 25% van het totale aantal opvarenden. Deze reddingsvloten moeten worden bediend door ten minste één tewaterlatingsmiddel aan elke zijde, waartoe die welke ingevolge paragraaf 1.2.1 aan boord moeten zijn, kunnen worden gerekend of door als gelijkwaardig goedgekeurde middelen die aan beide zijden kunnen worden gebruikt. De plaatsing van deze reddingsvloten behoeft echter niet te voldoen aan de vereisten van voorschrift 13.5.

1.3 Passagiersschepen die korte internationale reizen maken en niet voldoen aan de bijzondere vereisten voor waterdichte indeling voorgeschreven in voorschrift II-1/6.5 moeten reddingsboten en -vloten aan boord hebben die voldoen aan de vereisten van paragraaf 1.1.

1.4 Alle reddingsboten en -vloten die vereist zijn om het totale aantal opvarenden te ontschepen, moeten met hun totale bezetting aan personen en uitrusting te water kunnen worden gelaten binnen een tijdvak van 30 min gerekend vanaf het tijdstip waarop het sein „schip-verlaten” wordt gegeven.

1.5 Passagiersschepen van minder dan 500 ton en een totaal aantal opvarenden van minder dan 200 kunnen in plaats van voldoen aan het bepaalde in de paragrafen 1.1, 1.2 of 1.3, voldoen aan het volgende:

- .1 zij moeten aan elke zijde van het schip opblaasbare of vaste reddingsvloten hebben, die voldoen aan de vereisten van sectie 4.2 of 4.3 van de Code en gezamenlijk voldoende ruimte bieden aan het totale aantal opvarenden.
- .2 tenzij de reddingsvloten vereist in paragraaf 1.5.1 zijn geplaatst op een locatie vanwaar zij eenvoudig van de ene zijde naar de andere kunnen worden verplaatst op hetzelfde open dek, moeten extra reddingsvloten worden geplaatst zodat de totale capaciteit die aan elke zijde beschikbaar is, voldoende ruimte biedt voor 150% van het totale aantal opvarenden;
- .3 indien de reddingsboot vereist in paragraaf 2.2, tevens een gedeeltelijk of geheel overdekte reddingsboot is, die voldoet aan de vereisten van sectie 4.5 of 4.6 van de Code, mag deze worden gerekend tot de gezamenlijke capaciteit vereist in paragraaf 1.5.1, mits de totale capaciteit die aan elke zijde beschikbaar is, voldoende ruimte biedt voor ten minste 150% van het totale aantal opvarenden, en
- .4 ingeval één van de reddingsboten of -vloten verloren gaat of in het ongerede raakt, moeten er voldoende reddingsboten of -vloten voor gebruik aan elke zijde beschikbaar zijn, met inbegrip van de reddingsboten en -vloten die zijn geplaatst op een locatie vanwaar zij eenvoudig van de ene zijde naar de andere

zijde kunnen worden verplaatst op hetzelfde open dek, om ruimte te bieden voor het totale aantal opvarenden.

1.6 Een marien evacuatiesysteem of mariene evacuatiesystemen dat respectievelijk die voldoen aan sectie 6.2 van de Code kan respectievelijk kunnen worden vervangen door reddingsvlotten met een vergelijkbare capaciteit en tewaterlatingsmiddelen vereist door de paragrafen 1.1.1 of 1.2.1.

2 Hulpverleningsboten

2.1 Passagiersschepen van 500 ton en meer moeten aan iedere zijde van het schip ten minste één hulpverleningsboot hebben, die voldoet aan de vereisten van sectie 5.1 van de Code.

2.2 Passagiersschepen van minder dan 500 ton moeten ten minste één hulpverleningsboot aan boord hebben, die voldoet aan de vereisten van sectie 5.1 van de Code.

2.3 Een reddingsboot kan worden aanvaard als hulpverleningsboot mits deze ook voldoet aan de vereisten voor een hulpverleningsboot.

3 Begeleiding van reddingsvlotten

3.1 Er moet een voldoende aantal reddingsboten en hulpverleningsboten zijn geplaatst aan boord van passagiersschepen om er bij het ontschepen van het totale aantal opvarenden van verzekerd te zijn dat iedere reddingsboot of hulpverleningsboot niet meer dan zes reddingsvlotten behoeft te begeleiden.

3.2 Er moet een voldoende aantal reddingsboten en hulpverleningsboten zijn geplaatst aan boord van passagiersschepen die korte internationale reizen maken en die voldoen aan de bijzondere vereisten voor de waterdichte indeling voorgeschreven in voorschrift II-1/6.5 om er bij het ontschepen van het totale aantal opvarenden van verzekerd te zijn dat iedere reddingsboot of hulpverleningsboot niet meer dan negen reddingsvlotten behoeft te begeleiden.

Voorschrift 22

Persoonlijke reddingsmiddelen

1 Reddingsboeien

1.1 Een passagiersschip moet niet minder reddingsboeien die voldoen aan de vereisten van voorschrift 7.1 en sectie 2.1 van de Code aan boord hebben dan is voorgeschreven in de onderstaande tabel:

Lengte van het schip in meters	Minimum aantal reddingsboeien
minder dan 60	8
60 en minder dan 120	12
120 en minder dan 180	18

Lengte van het schip in meters	Minimum aantal reddingsboeien
180 en minder dan 240	24
240 en meer	30

1.2 Niettegenstaande de vereisten van voorschrift 7.1.3, moeten passagiersschepen met een lengte van minder dan 60 m ten minste 6 reddingsboeien voorzien van zelfontbrandend licht aan boord hebben.

2 Reddingsgordels

2.1 Behalve de reddingsgordels voorgeschreven in voorschrift 7.2, moet ieder passagiersschip voor ten minste 5% van het totale aantal opvarenden extra aan reddingsgordels aan boord hebben. Deze reddingsgordels moeten op opvallende plaatsen aan dek of bij de verzamelplaatsen zijn geborgen.

2.2 Indien reddingsgordels voor passagiers zijn opgeborgen in hutten die ver afgelegen zijn van de directe routes tussen de openbare ruimten en verzamelplaatsen, moeten de extra reddingsgordels voor deze passagiers als vereist in voorschrift 7.2.2 worden opgeborgen in de openbare ruimten, op de verzamelplaatsen of op de directe routes daartussen. De reddingsgordels moeten zodanig zijn opgeborgen dat de verdeling en het aantrekken ervan geen belemmering vormt voor een ordelijke verplaatsing naar de verzamel- en inschepingsplaatsen voor de reddingsboten en -vloten.

3 Lichten op reddingsgordels

3.1 Op alle passagiersschepen moet iedere reddingsgordel zijn voorzien van een licht, dat voldoet aan de vereisten van paragraaf 2.2.3 van de Code.

3.2 Lichten aangebracht op reddingsgordels aan boord van passagiersschepen vóór 1 juli 1998 die niet volledig voldoen aan de vereisten van paragraaf 2.2.3 van de Code kunnen door de Administratie worden aanvaard tot de datum waarop het licht op de reddingsgordels normaal zou worden vervangen of tot de datum van het eerste periodieke onderzoek na 1 juli 2001, welke van beide het eerst is.

4. Overlevingspakken en hulpmiddelen tegen warmteverlies

4.1 Alle passagiersschepen moeten voor iedere reddingsboot aan boord ten minste 3 overlevingspakken hebben die voldoen aan de vereisten van sectie 2.3 van de Code, en daarnaast voor elke persoon waarvoor in de reddingsboot ruimte is berekend en waarvoor geen overlevingspak is een hulpmiddel tegen warmteverlies dat voldoet aan de vereisten van sectie 2.5 van de Code. Deze overlevingspakken en hulpmiddelen tegen warmteverlies behoeven niet aan boord te zijn:

- .1 voor personen voor wie in geheel of gedeeltelijk overdekte reddingsboten ruimte is; of
- .2 indien het schip voortdurend reizen maakt in gebieden met een warm klimaat waar zij, naar het oordeel van de Administratie, niet nodig zijn.

4.2 De bepalingen van paragraaf 4.1.1 zijn tevens van toepassing op gedeeltelijk of geheel overdekte reddingsboten die niet voldoen aan de vereisten van sectie 4.5 of 4.6 van de Code, indien deze zijn geplaatst op schepen die vóór 1 juli 1986 zijn gebouwd.

Voorschrift 23

Voorzieningen voor inscheping in reddingsboten en -vlotten en hulpverleningsboten

1. Op passagiersschepen moeten de voorzieningen ten behoeve van het inschepen in reddingsboten en -vlotten zo zijn ontworpen dat:
 - .1 alle reddingsboten ingescheept en te water kunnen worden gelaten hetzij rechtstreeks vanaf de opstellingsplaats, hetzij vanaf een inschepingsdek maar niet van beide; en
 - .2 strijkbare reddingsvlotten ingescheept en te water kunnen worden gelaten vanaf een plaats direct naast de opstellingsplaats of vanaf een plaats waarheen in overeenstemming met de vereisten van voorschrift 13.5 het reddingsvlot wordt overgebracht voorafgaand aan het te water laten.
2. De voorzieningen van de hulpverleningsboot moeten zodanig zijn dat de hulpverleningsboot rechtstreeks vanaf de opstellingsplaats kan worden bemand en te water gelaten met het daartoe aangewezen aantal bemanningsleden aan boord. Niettegenstaande de vereisten in paragraaf 1.1 moeten de voorzieningen van de hulpverleningsboot, indien deze tevens reddingsboot is en de andere reddingsboten vanaf een inschepingsdek worden ingescheept, zodanig zijn dat de hulpverleningsboot ook ingescheept en te water gelaten kan worden vanaf het inschepingsdek.

Voorschrift 24

Plaatsing van reddingsboten en -vlotten

Bij de plaatsingshoogte van een reddingsboot of -vlot op een passagiersschip moet rekening worden gehouden met de vereisten van voorschrift 13.1.2, de voorwaarden voor ontsnapping van voorschrift II-2/28, de omvang van het schip en de vermoedelijke weersomstandigheden in het beoogde vaargebied. Voor een strijkbare reddingsboot of strijkbaar reddingsvlot mag de hoogte van de kop van de davit met de reddingsboot respectievelijk het reddingsvlot in de inschepingspositie, voor zover uitvoerbaar, niet hoger zijn dan 15 m boven de waterlijn met het schip in ballasttoestand.

Voorschrift 25

Verzamelplaatsen

Ieder passagiersschip moet niet alleen voldoen aan de vereisten in voorschrift 11, maar daarnaast verzamelplaatsen hebben die:

- .1 zich bevinden in de nabijheid van en de passagiers direct toegang verlenen tot de inschepingsplaatsen, tenzij deze op dezelfde plaats zijn; en
- .2 voldoende ruimte, maar ten minste 0,35 m² per passagier, hebben om de passagiers bijeen te brengen en aanwijzingen te geven.

Voorschrift 26

Aanvullende vereisten voor ro-ro passagiersschepen

1 Dit voorschrift is van toepassing op alle ro-ro passagiersschepen. Ro-ro passagiersschepen gebouwd:

- .1 op of na 1 juli 1998, moeten voldoen aan de vereisten van de paragrafen 2.3, 2.4, 3.1, 3.2, 3.3, 4 en 5;
- .2 op of na 1 juli 1986 en vóór 1 juli 1998 moeten uiterlijk op de datum van het eerste periodieke onderzoek na 1 juli 1998 voldoen aan de vereisten van paragraaf 5 en uiterlijk op de datum van het eerste periodieke onderzoek na 1 juli 2000 aan de vereisten van de paragrafen 2.3, 2.4, 3 en 4; en
- .3 vóór 1 juli 1986 moeten uiterlijk op de datum van het eerste periodieke onderzoek na 1 juli 1998 voldoen aan de vereisten van paragraaf 5 en uiterlijk op de datum van het eerste periodieke onderzoek na 1 juli 2000 aan de vereisten van de paragrafen 2.1, 2.2, 2.3, 2.4, 3 en 4.

2 Reddingsvloten

2.1 De reddingsvloten op ro-ro passagiersschepen moeten worden bediend door middel van mariene evacuatiesystemen die voldoen aan de vereisten van sectie 6.2 van de Code of door tewaterlatingsmiddelen die voldoen aan de vereisten van paragraaf 6.1.5 van de Code, en die gelijkmatig aan elke zijde van het schip zijn verdeeld.

2.2 Alle reddingsvloten op ro-ro passagiersschepen moeten zijn voorzien van voorzieningen voor vrij opdrijven die voldoen aan de vereisten van voorschrift 13.4.

2.3 Alle reddingsvloten op ro-ro passagiersschepen moeten zijn voorzien van een verstijfde inklimsteun die voldoet aan de vereisten van paragraaf 4.2.4.1 of 4.3.4.1 van de Code, naar gelang van toepassing.

2.4 Alle reddingsvloten op ro-ro passagiersschepen moeten van het automatisch zelfoprichtende type of het overkapt omkeerbare type zijn

en stabiel zijn in zeevang en volkomen veilig kunnen worden gebruikt, ongeacht de zijde waarop zij drijven. Een andere mogelijkheid is dat het schip, naast het normale aantal reddingsvloten, automatisch zelfrichtende of omkeerbare overdekte reddingsvloten aan boord heeft, waarvan de totale capaciteit voldoende is om plaats te bieden aan 50% van de personen voor wie geen plaats is in de reddingsboten. Deze aanvullende reddingsvlotcapaciteit moet worden vastgesteld op basis van het verschil tussen het totale aantal opvarenden en het aantal personen dat in reddingsboten kan worden ondergebracht. Alle betrokken reddingsvloten moeten door de Administratie zijn goedgekeurd, met inachtneming van de door de Organisatie aangenomen aanbevelingen.

3 Snelle hulpverleningsboten

3.1 Ten minste één van de hulpverleningsboten op ro-ro passagiersschepen moet een door de Administratie met inachtneming van de door de Organisatie aangenomen aanbevelingen goedgekeurde snelle hulpverleningsboot zijn.

3.2 Elke snelle hulpverleningsboot moet worden bediend door middel van door de Administratie goedgekeurde tewaterlatingsmiddelen. Bij de goedkeuring van deze middelen moet de Administratie er rekening mee houden dat de snelle hulpverleningsboot onder zeer slechte weersomstandigheden te water moet kunnen worden gelaten en kunnen worden teruggehaald; ook moet de Administratie hierbij rekening houden met de door de Organisatie aangenomen aanbevelingen.

3.3 Ten minste twee bemanningsleden van elke snelle hulpverleningsboot moeten zijn opgeleid en regelmatig oefenen, rekening houdend met de Code inzake de opleiding, diplomering en wachtdienst van zeevarenden (STCW-Code) en de door de Organisatie aangenomen aanbevelingen, met inbegrip van alle aspecten van redding, bediening, manoeuvres en besturing van deze vaartuigen in uiteenlopende omstandigheden, alsmede van het oprichten hiervan na kapseizen.

3.4 Ingeval de inrichting of omvang van een ro-ro passagiersschip gebouwd vóór 1 juli 1997 zodanig is dat het onmogelijk is de in paragraaf 3.1 vereiste snelle hulpverleningsboot te installeren, kan de snelle hulpverleningsboot worden geïnstalleerd op de plaats van een bestaande reddingsboot die wordt toegelaten als hulpverleningsboot of, in geval van schepen gebouwd vóór 1 juli 1986, boten gebruikt voor noodgevallen, mits aan alle volgende voorwaarden wordt voldaan:

- .1 de geïnstalleerde snelle hulpverleningsboot wordt bediend door een tewaterlatingsmiddel dat in overeenstemming is met de bepalingen van paragraaf 3.2;
- .2 de capaciteit die door de bovengenoemde vervanging van de reddingsboten en -vloten verloren gaat, wordt gecompenseerd door de installatie van reddingsvloten waarmee ten minste een gelijk aantal personen kan worden vervoerd als dat welk de vervangen reddingsboot had kunnen dragen; en
- .3 deze reddingsvloten worden bediend door middel van de be-

staande tewaterlatingsmiddelen of mariene evacuatiesystemen.

4 Reddingsmiddelen

4.1 Elk ro-ro passagiersschip moet zijn uitgerust met doeltreffende middelen voor het snel terughalen van overlevenden uit het water en voor het overbrengen van overlevenden van hulpverleningsunits of reddingsboten en -vloten naar het schip.

4.2 De middelen voor het overbrengen van overlevenden naar het schip mogen deel uitmaken van een marien evacuatiesysteem, of deel uitmaken van een systeem ontworpen voor reddingsdoeleinden.

4.3 Ingeval de glijbaan van een marien evacuatiesysteem is bedoeld als middel om overlevenden over te brengen naar het schipdek, moet de glijbaan zijn voorzien van handlijnen of ladders om beklimming van de glijbaan te vergemakkelijken,

5 Reddingsgordels

5.1 Onverminderd de vereisten van voorschriften 7.2 en 22.2, moet een voldoende aantal reddingsgordels zijn opgeborgen in de nabijheid van de verzamelplaatsen zodat passagiers niet naar hun hut terug hoeven te gaan om hun reddingsgordel op te halen.

5.2 Op ro-ro passagiersschepen moet iedere reddingsgordel zijn voorzien van een licht, dat voldoet aan de vereisten van paragraaf 2.2.3 van de Code.

Voorschrift 27

Informatie betreffende passagiers

1 Alle personen aan boord van alle passagiersschepen moeten voor het vertrek worden geteld.

2 Informatie over personen die te kennen hebben gegeven speciale zorg of hulp nodig te hebben in noodsituaties moet voor het vertrek worden vastgelegd en aan de kapitein worden medegedeeld.

3 Bovendien moeten uiterlijk op 1 januari 1999 de namen en het geslacht van alle opvarenden, waarbij onderscheid wordt gemaakt tussen volwassenen, kinderen en zuigelingen, worden geregistreerd voor opsporings- en reddingsdoeleinden.

4 De in de paragrafen 1, 2 en 3 verlangde informatie moet aan wal worden bewaard en wanneer dat nodig is snel ter beschikking van opsporings- en reddingsdiensten worden gesteld.

5 De Administraties mogen passagiersschepen vrijstellen van de vereisten van paragraaf 3, indien de reizen in lijndienst van deze schepen het praktisch onuitvoerbaar maken deze registratie op te maken.

Voorschrift 28

Helikopterlandingsplaatsen en -evacuatieplaatsen

1 Alle ro-ro passagiersschepen moeten zijn uitgerust met een door de Administratie met inachtneming van de door de Organisatie aangenomen aanbevelingen goedgekeurde helikopterlandingsplaats.

2 Passagiersschepen met een lengte van 130 m of meer, gebouwd op of na 1 juli 1999, moeten zijn voorzien van een door de Administratie met inachtneming van de door de Organisatie aangenomen aanbevelingen goedgekeurde helikopterlandingsplaats.

Voorschrift 29

Beslissingshulpsysteem voor kapiteins van passagiersschepen

1 Dit voorschrift is van toepassing op alle passagiersschepen. Passagiersschepen gebouwd vóór 1 juli 1997 moeten uiterlijk op de datum van het eerste periodieke onderzoek na 1 juli 1999 voldoen aan de vereisten van dit voorschrift.

2 Op alle passagiersschepen moet op de brug een beslissingshulpsysteem voor het beheersen van noodsituaties zijn aangebracht.

3 Het systeem moet minimaal bestaan uit een of meer gedrukte noodplannen. Alle voorzienbare noodsituaties moeten in het noodplan of de noodplannen zijn aangegeven, met inbegrip van, maar niet beperkt tot, de volgende hoofdgroepen noodsituaties:

- .1 brand;
- .2 beschadiging van het schip;
- .3 vervuiling;
- .4 wederrechtelijke handelingen die de veiligheid van het schip en de veiligheid van passagiers en bemanning in gevaar brengen;
- .5 personeelongelukken;
- .6 ongelukken verband houdende met de lading; en
- .7 noodhulp aan andere schepen.

4 De in het noodplan of de noodplannen vastgestelde noodprocedures moeten een beslissingshulpmiddel bevatten voor de kapitein voor de beheersing van alle mogelijke combinaties van noodsituaties.

5 Het noodplan of de noodplannen moeten een uniforme structuur hebben en eenvoudig te gebruiken zijn. Indien van toepassing moet de feitelijke beladingstoestand berekend voor de stabiliteit gedurende de reis van het passagiersschip, worden gebruikt voor de beheersing van averij.

6 In aanvulling op het gedrukte noodplan of de gedrukte noodplannen, kan de Administratie ook het gebruik aanvaarden van een geauto-

matiseerd beslissingshulpsysteem op de brug dat voorziet in alle in het noodplan of de noodplannen, procedures, checklists, enzovoort, opgenomen informatie en dat in staat is een lijst te produceren van aanbevolen maatregelen die in mogelijke noodsituaties moeten worden getroffen.

Voorschrift 30

Oefeningen

1 Dit voorschrift is van toepassing op alle passagiersschepen.

2 Op passagiersschepen moet één verlaatrol en één brandrol per week plaatsvinden. De voltallige bemanning hoeft niet bij iedere oefening betrokken te zijn op voorwaarde dat ieder bemanningslid elke maand deelneemt aan een verlaat- en brandrol als vereist in voorschrift 19.3.2. Passagiers moeten sterk worden aangemoedigd deze oefeningen bij te wonen.

AFDELING III

VRACHTSCHEPEN (AANVULLENDE VEREISTEN)

Voorschrift 31

Reddingsboten en -vloten en hulpverleningsboten

1 Reddingsboten en -vloten

1.1 Vrachtschepen moeten aan boord hebben:

- .1 één of meer volledig overdekte reddingsboten die voldoen aan de vereisten van sectie 4.6 van de Code en per zijde van het schip gezamenlijk voldoende ruimte bieden aan het totale aantal opvarenden; en
- .2 bovendien een of meer opblaasbare of vaste reddingsvloten die voldoen aan de vereisten van sectie 4.2 of 4.3 van de Code, opgesteld op een plaats waar zij eenvoudig op hetzelfde open dek van de ene zijde naar de andere kunnen worden overgebracht en met gezamenlijk voldoende ruimte voor ten minste 25% van het totale aantal opvarenden. Indien het reddingsvlot of de reddingsvloten niet is respectievelijk zijn opgesteld op een plaats waar zij op hetzelfde open dek eenvoudig van de ene zijde naar de andere kunnen worden overgebracht, moet de totale capaciteit die aan elke zijde beschikbaar is, voldoende ruimte bieden voor het totale aantal opvarenden.

1.2 In plaats van te voldoen aan het bepaalde in paragraaf 1.1 mogen vrachtschepen aan boord hebben:

- .1 één of meer reddingsboten die voldoen aan de vereisten van sectie 4.7 van de Code en door middel van vrije val over de achtersteven van het schip te water gelaten kunnen worden, en

gezamenlijk voldoende ruimte bieden aan het totale aantal opvarenden; en

- .2 bovendien een of meer opblaasbare of vaste reddingsvloten hebben, die voldoen aan de vereisten van sectie 4.2 of 4.3 van de Code en aan elke zijde van het schip gezamenlijk voldoende ruimte bieden aan het totale aantal opvarenden. De reddingsvloten aan ten minste één zijde van het schip moeten worden bediend door tewaterlatingsmiddelen.

1.3 In plaats van te voldoen aan het bepaalde in de paragrafen 1.1 of 1.2, mogen vrachtschepen, anders dan olietankschepen, chemicaliëntankschepen en gasschepen, met een lengte van minder dan 85 m voldoen aan het volgende:

- .1 zij moeten aan elke zijde van het schip één of meer opblaasbare of vaste reddingsvloten hebben, die voldoen aan de vereisten van sectie 4.2 of 4.3 van de Code en gezamenlijk voldoende ruimte bieden aan het totale aantal opvarenden;
- .2 tenzij de reddingsvloten vereist in paragraaf 1.3.1 zijn opgesteld op een plaats waar zij op hetzelfde open dek eenvoudig van de ene zijde naar de andere kunnen worden overgebracht, moeten extra reddingsvloten worden geplaatst, zodat de totale capaciteit die aan elke zijde beschikbaar is, voldoende ruimte biedt voor 150% van het totale aantal opvarenden;
- .3 indien de hulpverleningsboot vereist in paragraaf 2, tevens een geheel overdekte reddingsboot is die voldoet aan de vereisten van sectie 4.6 van de Code, mag deze worden gerekend tot de gezamenlijke capaciteit vereist in paragraaf 1.3.1, mits de totale capaciteit die aan elke zijde van het schip beschikbaar is, voldoende ruimte biedt voor ten minste 150% van het totale aantal opvarenden; en
- .4 ingeval één van de reddingsboten of -vloten verloren gaat of in het ongerede raakt, moeten er voldoende reddingsboten en -vloten voor gebruik aan elke zijde beschikbaar zijn, met inbegrip van reddingsboten of -vloten die zijn opgesteld op een plaats waar zij op hetzelfde open dek eenvoudig van de ene zijde naar de andere kunnen worden overgebracht en ruimte bieden voor het totale aantal opvarenden.

1.4 Op vrachtschepen waarop de horizontale afstand tussen de uiterste punt van de voor- of achterstevan en de punt van de respectievelijk het dichtstbijzijnde reddingsboot of -vlot meer dan 100 m bedraagt, moet behalve de reddingsvloten vereist in paragrafen 1.1.2 en 1.2.2 een reddingsvlot zover mogelijk naar voren of naar achteren of één zover mogelijk naar voren en een ander zover mogelijk naar achteren geplaatst worden als redelijk en uitvoerbaar is. Dit reddingsvlot of deze reddingsvloten mogen goed vastgezet zijn, maar zo dat deze met de hand ontkoppeld kunnen worden; deze reddingsvloten behoeven niet van het type te zijn dat te water kan worden gelaten met een goedgekeurd tewaterlatingsmiddel.

1.5 Met uitzondering van de reddingsboten en -vloten genoemd in voorschrift 16.1.1, moeten alle reddingsboten en -vloten die vereist zijn om het totale aantal opvarenden te ontschepen met hun totale bezetting aan personen en uitrusting te water gelaten kunnen worden binnen een tijdvak van 10 minuten gerekend vanaf het tijdstip waarop het sein „schip-verlaten” wordt gegeven.

1.6 Chemicaliëntankers en gasschepen die ladingen vervoeren die giftige dampen of gassen afgeven, moeten in plaats van reddingsboten die voldoen aan de vereisten van sectie 4.6 van de Code, reddingsboten hebben met een onafhankelijk luchttoevoersysteem dat voldoet aan de vereisten van sectie 4.8 van de Code.

1.7 Olietankschepen, chemicaliëntankers en gasschepen die ladingen vervoeren met een vlamptpunt van minder dan 60°C (closed cup test), moeten in plaats van de geheel overdekte reddingsboten die voldoen aan de vereisten van sectie 4.6 van de Code, brandbestendige reddingsboten hebben die voldoen aan de vereisten van sectie 4.9 van de Code.

2 Hulpverleningsboten

Vrachtschepen moeten ten minste één hulpverleningsboot aan boord hebben, die voldoet aan de vereisten van sectie 5.1 van de Code. Een reddingsboot kan worden aanvaard als hulpverleningsboot mits deze ook voldoet aan de vereisten voor een hulpverleningsboot.

3. Behalve hun reddingsboten, moeten alle vrachtschepen gebouwd vóór 1 juli 1986 aan boord hebben:

- .1 één of meer reddingsvlotten die aan beide zijden van het schip te water gelaten kunnen worden en gezamenlijk voldoende ruimte bieden aan het totale aantal opvarenden. Dit reddingsvlot of deze reddingsvlotten moeten zijn uitgerust met een sjorring of een gelijkwaardig middel voor vastzetten dat het reddingsvlot automatisch vrij laat opdrijven bij zinkend schip; en
- .2 indien de horizontale afstand tussen de uiterste punt van de voor- of achtersteven en de punt van de dichtstbijzijnde reddingsboot of het dichtstbijzijnde reddingsvlot meer dan 100 m bedraagt, moet behalve de reddingsvlotten vereist in paragraaf 3.1 een reddingsvlot zover mogelijk naar voren of naar achteren of één zover mogelijk naar voren en een ander zover mogelijk naar achteren geplaatst worden als redelijk en uitvoerbaar is. Niettegenstaande de vereisten van paragraaf 3.1 mag dit reddingsvlot of mogen deze reddingsvlotten goed vastgezet zijn, en zo dat deze met de hand ontkoppeld kunnen worden.

Voorschrift 32

Persoonlijke reddingsmiddelen

1 Reddingsboeien

1.1 Vrachtschepen mogen niet minder reddingsboeien die voldoen aan de vereisten van voorschrift 7.1 en sectie 2.1 van de Code aan boord

hebben dan is voorgeschreven in de onderstaande tabel:

Lengte van het schip in meters	Minimum aantal reddingsboeien
minder dan 100	8
100 en minder dan 150	10
150 en minder dan 200	12
200 en meer	14

1.2 Op tankschepen moeten de zelfontbrandende lichten, vereist in voorschrift 7.1.3, van het elektrische-batterijtype zijn.

2 Lichten op reddingsgordels

2.1 Deze paragraaf is van toepassing op alle vrachtschepen.

2.2 Op vrachtschepen moet iedere reddingsgordel zijn voorzien van een licht, dat voldoet aan de vereisten van paragraaf 2.2.3 van de Code.

2.3 Lichten aangebracht op reddingsgordels aan boord van vrachtschepen vóór 1 juli 1998 die niet volledig voldoen aan de vereisten van paragraaf 2.2.3 van de Code kunnen door de Administratie worden aanvaard tot de datum waarop het licht op de reddingsgordels normaal zou worden vervangen of tot de datum van het eerste periodieke onderzoek na 1 juli 2001, welke van beide het eerst is.

3 Overlevingspakken en hulpmiddelen tegen warmteverlies

3.1 Deze paragraaf is van toepassing op alle vrachtschepen.

3.2 Vrachtschepen moeten voor iedere reddingsboot aan boord ten minste 3 overlevingspakken hebben, die voldoen aan de vereisten van sectie 2.3 van de Code, of, indien de Administratie dat noodzakelijk en uitvoerbaar acht, één overlevingspak dat voldoet aan de vereisten van sectie 2.3 van de Code voor iedere opvarende; het schip moet echter behalve de hulpmiddelen tegen warmteverlies, vereist in de paragrafen 4.1.5.1.24, 4.4.8.31 en 5.1.2.2.13 van de Code, hulpmiddelen tegen warmteverlies, die voldoen aan de vereisten van sectie 2.5 van de Code aan boord hebben voor de opvarenden die niet zijn voorzien van overlevingspakken. Deze overlevingspakken en hulpmiddelen tegen warmteverlies behoeven niet te worden voorgeschreven, indien het schip:

- .1 geheel overdekte reddingsboten heeft aan beide zijden van het schip die gezamenlijk voldoende ruimte bieden aan het totale aantal opvarenden; of
- .2 geheel overdekte reddingsboten heeft die door middel van vrije val over de achtersteven van het schip te water kunnen worden gelaten en gezamenlijk voldoende ruimte bieden voor het totale aantal opvarenden en die rechtstreeks vanaf de opstellingsplaats worden ingescheept en te water gelaten tezamen met de reddingsvloten die aan iedere zijde van het schip voldoende ruimte bieden om het totale aantal opvarenden op te nemen, of

- .3 voortdurend reizen maakt in gebieden met een warm klimaat waar, naar het oordeel van de Administratie, overlevingspakken niet nodig zijn.
- 3.3 Vrachtschepen die voldoen aan de vereisten van voorschrift 31.1.3 moeten overlevingspakken, die voldoen aan de vereisten van sectie 2.3 van de Code hebben voor alle opvarenden, tenzij het schip:
 - .1 strijkbare reddingsvloten heeft; of
 - .2 reddingsvloten heeft die worden bediend door middel van goedgekeurde gelijkwaardige middelen om aan beide zijden van het schip te kunnen worden gebruikt en waarvoor het niet noodzakelijk is via het water in het reddingsvlot te komen; of
 - .3 voortdurend reizen maakt in gebieden met een warm klimaat waar, naar het oordeel van de Administratie, overlevingspakken niet nodig zijn.
- 3.4 De overlevingspakken voorgeschreven in dit voorschrift kunnen worden gebruikt om te voldoen aan de vereisten van voorschrift 7.3.
- 3.5 De geheel overdekte reddingsboten bedoeld in de paragrafen 3.2.1 en 3.2.2 behoeven op vrachtschepen gebouwd vóór 1 juli 1986 niet te voldoen aan de vereisten van sectie 4.6 van de Code.

Voorschrift 33

Voorzieningen voor inscheping en tewaterlating van reddingsboten en -vloten

1 De voorzieningen voor het te water laten van de reddingsboten en -vloten van een vrachtschip moeten zo zijn ontworpen dat reddingsboten rechtstreeks vanaf de opstellingsplaats ingescheept en te water gelaten kunnen worden en dat strijkbare reddingsvloten ingescheept en te water gelaten kunnen worden vanaf een plaats direct naast de opstellingsplaats of vanaf een plaats waarheen in overeenstemming met de vereisten van voorschrift 13.5 het reddingsvlot wordt overgebracht voorafgaand aan het te water laten.

2 Op vrachtschepen van 20.000 ton en meer moeten de reddingsboten te water kunnen worden gelaten, terwijl het schip met een snelheid tot 5 knopen in kalm water vooruit vaart, waar nodig met gebruikmaking van een vanglijn.

AFDELING IV

VEREISTEN VOOR REDDINGSMIDDELEN EN -VOORZIENINGEN

Voorschrift 34

Alle reddingsmiddelen en -voorzieningen moeten voldoen aan alle toepasselijke vereisten van de Code.

AFDELING V

DIVERSEN

Voorschrift 35

Handboek voor opleiding en hulpmiddelen voor oefeningen aan boord

1 Dit voorschrift is van toepassing op alle schepen.

2 In ieder bemanningsverblijf of in iedere hut voor bemanningsleden moet een handboek voor opleiding voorhanden zijn dat voldoet aan de vereisten van paragraaf 3.

3 Het handboek voor opleiding, dat uit verschillende banden kan bestaan, dient instructies en informatie te bevatten, gesteld in gemakkelijk te begrijpen bewoordingen en waar mogelijk geïllustreerd, ten aanzien van de aan boord geplaatste reddingsmiddelen en de beste overlevingsmethoden. Deze informatie kan, in plaats van door dit handboek, met behulp van audio-visuele middelen worden verstrekt. De volgende punten moeten uitvoerig worden toegelicht:

- .1 het aantrekken van reddings gordels, overlevingspakken en beschermende kleding tegen afkoeling, al naar gelang van toepassing is;
- .2 het verzamelen op de daarvoor aangewezen plaatsen;
- .3 het inschepen, het te water laten en het vrijkomen van de reddingsboten en -vloten en de hulpverleningsboten; met inbegrip, indien van toepassing, van het gebruik van mariene evacuatie-systemen;
- .4 de manier van te water laten vanuit de reddingsboot of het reddingsvlot;
- .5 het ontkoppelen van de tewaterlatingsmiddelen;
- .6 de werkwijze en het gebruik van de middelen voor bescherming op de tewaterlatingsplaatsen, voor zover van toepassing;
- .7 de verlichting van de tewaterlatingsplaatsen;
- .8 het gebruik van alle overlevingsuitrusting;
- .9 het gebruik van alle ontdekkingsmiddelen;
- .10 het gebruik van radiomiddelen voor redding, met behulp van illustraties;

- .11 het gebruik van drijfankers;
- .12 het gebruik van motor en accessoires;
- .13 het terugzetten van de reddingsboten en -vloten en hulpverleningsboten, plaatsen en sjoeren daarbij inbegrepen;
- .14 de gevaren van blootstelling aan weer en zee en de noodzaak van warme kleding;
- .15 het beste gebruik van de voorzieningen van de reddingsboten en -vloten ten behoeve van overleving;
- .16 de manieren van redding uit zee, waarbij inbegrepen het gebruik van helioperreddingsuitrusting (stroppen, manden, draagbaren), reddingsboeien met broeking en reddingsapparatuur gebruikt vanaf de wal en het lijnwerptoestel van het schip;
- .17 alle andere activiteiten die de verlaatrol en de noodinstructies aangeven; en
- .18 aanwijzingen voor noodreparaties van de reddingsmiddelen.

4 Ieder schip dat is uitgerust met een marien evacuatiesysteem, moet zijn voorzien van hulpmiddelen voor oefeningen aan boord in het gebruik van het systeem.

Voorschrift 36

Instructies voor onderhoud aan boord

Instructies voor het onderhoud van reddingsmiddelen aan boord moeten gemakkelijk te begrijpen zijn, waar mogelijk geïllustreerd en waar van toepassing de volgende gegevens voor elk middel omvatten:

- .1 een controlelijst, te gebruiken wanneer de inspecties vereist in voorschrift 20.7 worden verricht;
- .2 aanwijzingen ten behoeve van onderhoud en reparaties;
- .3 schema voor periodiek onderhoud;
- .4 schematische voorstellingen van smeerpunten en aanbevolen smeermiddelen;
- .5 een lijst met vervangbare onderdelen;
- .6 een lijst met adressen waar reserve-onderdelen verkregen kunnen worden; en
- .7 een logboek voor aantekening van inspecties en onderhoud.

Voorschrift 37

Verlaatrol en aanwijzingen bij noodgevallen

1 De verlaatrol moet bijzonderheden bevatten inzake het algemeen alarmsignaal en het scheepsomroepsysteem voorgeschreven in sectie 7.2 van de Code, en tevens de maatregelen aangeven die door bemanning en passagiers moeten worden genomen wanneer dit alarm wordt gegeven. De verlaatrol moet ook aangeven hoe het sein „schip-verlaten” wordt gegeven.

2 Op elk passagiersschip moeten procedures zijn voor het localiseren en redden van passagiers die vastzitten in hun hutten.

3 De verlaatrol moet de taken aangeven die zijn opgedragen aan de verschillende bemanningsleden, waaronder:

- .1 het sluiten van de waterdichte deuren, branddeuren, afsluiters, spuigaten, zijpoorten, dakramen, patrijspoorten, en soortgelijke openingen in het schip;
- .2 het uitrusten van de reddingsboten en -vloten en andere reddingsmiddelen;
- .3 het gereed maken en te water laten van reddingsboten en -vloten;
- .4 het gereed maken van andere reddingsmiddelen in het algemeen;
- .5 het verzamelen van de passagiers;
- .6 het gebruik van de communicatieuitrusting;
- .7 het bemannen van de brandweerploegen die aangewezen zijn om branden te bestrijden; en
- .8 bijzondere taken opgedragen in verband met het gebruik van de brandbestrijdingsuitrusting en -installaties.

4 De verlaatrol moet aangeven welke officieren zijn aangewezen om ervoor te zorgen dat de reddings- en brandbestrijdingsmiddelen in goede staat en klaar voor onmiddellijk gebruik worden gehouden.

5 De verlaatrol moet vervangers aangeven voor de belangrijkste personen, indien dezen niet tot handelen in staat zouden zijn, rekening houdende met het gegeven dat verschillende noodsituaties verschillende maatregelen noodzakelijk maken.

6 Op de verlaatrol moeten de aan de bemanning opgedragen taken in noodsituaties ten aanzien van de passagiers worden aangegeven. Deze taken moeten onder meer omvatten:

- .1 het waarschuwen van de passagiers;
 - .2 het erop toezien dat zij voldoende gekleed zijn en dat zij hun reddingsgordels goed hebben aangetrokken;
 - .3 het verzamelen van de passagiers op hun verzamelplaatsen;
 - .4 het bewaren van de orde in de gangen en op de trappen en algemeen toezicht uitoefenen op de verplaatsing van de passagiers; en
 - .5 het ervoor zorgen dat een voorraad dekens naar de reddingsboten en -vloten wordt gebracht.
7. De verlaatrol moet zijn opgemaakt voordat het schip zee kiest. Nadat de verlaatrol eenmaal is opgemaakt, moet de kapitein wanneer een verandering in de samenstelling van de bemanning wijziging van de verlaatrol noodzakelijk maakt, de verlaatrol herzien of een nieuwe verlaatrol opmaken.
8. De verlaatrol op passagiersschepen moet goedgekeurd zijn.

HOOFDSTUK VI
VERVOER VAN LADING

Voorschrift 2

Ladinggegevens

9 De bestaande tweede subparagraaf van paragraaf 2 wordt vervangen door:

„2 in geval van bulkclading, gegevens over de stuwfactor van de lading, de trimprocedures, de kans op schuiven met inbegrip van de storthoek, indien van toepassing, en andere relevante bijzondere kenmerken van de lading. In geval van concentraten of andere verpappende ladingen, extra gegevens in de vorm van een certificaat over het vochtgehalte van de lading en de voor vervoer toelaatbare grenswaarde van het vochtgehalte.”

Voorschrift 7

Stuwage van bulkclading

10 De huidige tekst van voorschrift 7 wordt vervangen door:

Voorschrift 7

Laden, lossen en stuwen van bulkclading

1 Voor de toepassing van dit voorschrift wordt onder vertegenwoordiger van de laad-/loslocatie verstaan de door de laad-/loslocatie of een andere faciliteit waar het schip laadt of lost aangestelde persoon die verantwoordelijk is voor de handelingen door die haven of faciliteit die verband houden met het desbetreffende schip.

2 Om de kapitein in staat te stellen te grote spanningen op de constructie van het schip te voorkomen, moet op het schip een boekje aanwezig zijn dat is opgesteld in een taal die beheerst wordt door de officieren van het schip die verantwoordelijk zijn voor de behandeling van de lading. Indien deze taal niet de Engelse taal is, moet op het schip tevens een boekje aanwezig zijn dat in de Engelse taal is opgesteld. Het boekje moet ten minste bevatten:

- .1 stabiliteitsgegevens als vereist in voorschrift II-1/22;
- .2 ballast- en ontballastpercentages en -volumes;
- .3 maximaal toegestane belasting per oppervlakte-eenheid van de bovenbeplating van de tanks;
- .4 maximaal toegestane belasting per ruim;
- .5 algemene instructies voor laden en lossen met betrekking tot de sterkte van de constructie van het schip met inbegrip van beper-

kingen bij de ongunstigste omstandigheden tijdens laden, lossen, ballasten en de reis;

- .6 eventuele speciale restricties zoals beperkingen bij de ongunstigste omstandigheden als opgelegd door de Administratie of een door haar erkende organisatie, indien van toepassing; en
- .7 waar berekeningen van de sterkte zijn vereist, maximaal toegestane krachten en momenten op de romp van het schip tijdens laden, lossen en de reis.

3 Voordat een vaste lading wordt geladen of gelost, moeten de kapitein en de vertegenwoordiger van de laad-/loslocatie een plan overeenkomen dat waarborgt dat de toegestane krachten en momenten op het schip niet worden overschreden tijdens het laden of lossen en dat voorziet in de volgorde, de kwantiteit en het tempo van laden of lossen, rekening houdend met de snelheid van laden of lossen, het aantal stortingen en de ballast en ontballastcapaciteit van het schip. Het plan en eventuele latere wijzigingen daarop moeten worden ingediend bij de desbetreffende autoriteit van de staat waartoe de haven behoort.

4 Bulkladingen worden geladen en redelijk vlak getrimd, voor zover nodig, tot de zijden van de laadruimte teneinde het risico van het schuiven tot een minimum te beperken en te verzekeren dat toereikende stabiliteit zal worden gehandhaafd gedurende de reis.

5 Wanneer bulkladingen in tussendekruimten worden vervoerd, moeten de luiken van die tussendekruimten gesloten zijn in gevallen waarin de beladingsgegevens een onaanvaardbare spanning van de bodemconstructie tonen indien de luiken worden opengelaten. De lading moet redelijk vlak zijn getrimd en moet van zijde tot zijde reiken dan wel op zijn plaats worden gehouden door extra langsschotten van voldoende sterkte. De veilige dekbelasting van de tussendekken wordt in acht genomen om te verzekeren dat de dekconstructie niet wordt overbelast.

6 De kapitein en de vertegenwoordiger van de laad-/loslocatie moeten ervoor zorgen dat de laad- en loshandelingen verlopen in overeenstemming met het overeengekomen plan.

7 Indien tijdens het laden of lossen één van de beperkingen van het schip bedoeld in paragraaf 2 wordt overschreden of waarschijnlijk zal worden overschreden indien het laden of lossen doorgaat, heeft de kapitein het recht de laad- of loshandeling te onderbreken en is hij verplicht de desbetreffende autoriteit van de staat van de haven waar het plan is ingediend op de hoogte te stellen. De kapitein en de vertegenwoordiger van de laad-/loslocatie moeten erop toezien dat herstellende maatregelen worden genomen. Bij het lossen van ladingen moeten de kapitein en de vertegenwoordiger van de laad-/loslocatie erop toezien dat de wijze van lossen niet leidt tot beschadiging van de constructie van het schip.

8 De kapitein moet erop toezien dat de bemanning van het schip de behandeling van de lading voortdurend bewaakt. Indien mogelijk, moet

de diepgang van het schip regelmatig worden gecontroleerd tijdens laden of lossen ter bevestiging van de verstrekte inhoudsgegevens. Iedere observatie ten aanzien van diepgang en inhoud moet worden opgenomen in een ladingslogboek. Indien significante afwijkingen van het overeengekomen plan worden ontdekt, moeten de ladings- of de ballast-handelingen of beide worden aangepast om ervoor te zorgen dat de afwijkingen worden gecorrigeerd.

HOOFDSTUK XI

SPECIALE MAATREGELEN TER VERBETERING VAN DE VEILIGHEID OP ZEE

Voorschrift 1

Bevoegdverklaring van de erkende organisaties

11 De huidige tekst van het voorschrift wordt vervangen door:

„De in voorschrift I/6 bedoelde organisaties moeten de richtlijnen naleven die de Organisatie heeft aangenomen door resolutie A.739(18) eventueel als gewijzigd door de Organisatie, en de door de Organisatie door resolutie A.789(19) aangenomen specificaties, eventueel als gewijzigd door de Organisatie, op voorwaarde dat deze wijzigingen worden aangenomen, in werking worden gesteld en van kracht worden overeenkomstig het bepaalde in artikel VIII van dit Verdrag betreffende de procedure voor wijziging die van toepassing is op de Bijlage, met uitzondering van Hoofdstuk I.”

Resolutie MSC.57(67) van 5 december 1996

De wijzigingen zijn op 1 juli 1998 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

Bij proces-verbaal van correctie van 18 maart 1999 heeft de Secretaris-Generaal van de Internationale Maritieme Organisatie een correctie in de tekst van Resolutie MSC.57(67) van 5 december 1996 aangebracht. De correctie in de Engelse tekst luidt als volgt:

CHAPTER II-2

Regulation 56,

Paragraph 57 Replace by:

„57 The text below the title is replaced by the following:

„(This regulation applies to ships constructed on or after 1 February 1992, except that paragraphs 7, 8.3 and 9 apply to ships constructed on or after 1 July 1998).”

De vertaling (inclusief correctie) in het Nederlands van Resolutie MSC.57(67) van 5 december 1996 luidt als volgt (zie *Trb.* 1998, 155 voor de Engelse tekst):

Resolutie MSC.57(67)
(aangenomen op 5 december 1996)

**Aanneming van wijzigingen op het Internationaal Verdrag voor de
beveiliging van mensenlevens op zee, 1974**

De Maritieme Veiligheidscommissie,

Herinnerend aan artikel 28(b) van het Verdrag inzake de Internationale Maritieme Organisatie betreffende de taken van de Commissie,

Voorts herinnerend aan artikel VIII(b) van het Internationaal Verdrag voor de beveiliging van mensenlevens op zee (SOLAS), 1974, hierna te noemen „het Verdrag”, betreffende de procedure voor wijziging van de Bijlage bij het Verdrag, anders dan de bepalingen van Hoofdstuk I daarvan,

Na bestudering, tijdens haar zevenenzestigste zitting, van wijzigingen van het Verdrag, voorgesteld en rondgezonden overeenkomstig artikel VIII(b)(i) van het Verdrag,

1. Neemt, overeenkomstig artikel VIII(b)(iv) van het Verdrag, de wijzigingen van het Verdrag aan, waarvan de tekst is vervat in de Bijlage bij deze Resolutie;

2. Bepaalt, in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag, dat de wijzigingen worden geacht te zijn aanvaard op 1 januari 1998, tenzij vóór die datum meer dan een derde van de Verdragsluitende Regeringen die Partij zijn bij het Verdrag, of de Verdragsluitende Regeringen waarvan de gecombineerde koopvaardijvloeden niet minder dan vijftig procent van de brutotonnage van de wereldkoopvaardijvloot vormen, hun bezwaren tegen de wijzigingen kenbaar hebben gemaakt;

3. Nodigt de Verdragsluitende Regeringen uit er nota van te nemen dat, in overeenstemming met artikel VIII(b)(vii)(2) van het Verdrag, de wijzigingen na hun aanvaarding in overeenstemming met punt 2 hierboven, in werking treden op 1 juli 1998;

4. Verzoekt de Secretaris-Generaal, in overeenstemming met artikel VIII(b)(v) van het Verdrag, voor eensluidend gewaarmerkte afschriften

van deze resolutie en van de tekst van de in de Bijlage vervatte wijzigingen te doen toekomen aan alle Verdragsluitende Regeringen die Partij zijn bij het Verdrag;

5. Verzoekt de Secretaris-Generaal voorts afschriften van deze resolutie en de Bijlage daarbij te doen toekomen aan Leden van de Organisatie waarvan de Regeringen geen Partij zijn bij het Verdrag.

Bijlage

Wijzigingen op het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974

HOOFDSTUK II-1

CONSTRUCTIE – WATERDICHTE INDELING EN STABILITEIT, MACHINE-INSTALLATIES EN ELEKTRISCHE INSTALLATIES

DEEL A-1

CONSTRUCTIE VAN SCHEPEN

De volgende nieuwe voorschriften 3-3 en 3-4 worden toegevoegd aan deel A-1 van hoofdstuk II-1:

„Voorschrift 3-3

Veilige toegang tot het voorschip van tankschepen

1. Voor de toepassing van dit voorschrift en voorschrift 3-4 wordt onder tankschepen verstaan olietankschepen zoals omschreven in voorschrift 2.12, chemicaliëntankschepen zoals omschreven in voorschrift VII/8.2 en gastankschepen zoals omschreven in voorschrift VII/11.2.

2. Ieder tankschip gebouwd op of na 1 juli 1998 moet zijn uitgerust met voorzieningen waarmee de bemanning ook onder zware weersomstandigheden veilig toegang kan verkrijgen tot het voorschip. Op tankschepen die vóór 1 juli 1998 zijn gebouwd, moeten dergelijke voorzieningen worden aangebracht bij de eerstvolgende geplande dokking na 1 juli 1998, maar uiterlijk op 1 juli 2001. Deze voorzieningen moeten door de Administratie overeenkomstig de door de Organisatie opgestelde richtlijnen worden goedgekeurd.

Voorschrift 3-4

Noodsleepvoorzieningen aan boord van tankschepen

Noodsleepvoorzieningen moeten worden aangebracht op het voorschip en op het achterschip van alle tankschepen met een draagvermo-

gen van 20.000 ton of meer, gebouwd op of na 1 januari 1996. Aan boord van tankschepen die vóór 1 januari 1996 zijn gebouwd, moet een dergelijke voorziening worden aangebracht bij de eerstvolgende geplande dokking na 1 januari 1996, maar uiterlijk op 1 januari 1999. Het ontwerp en de constructie van de sleepvoorziening moet door de Administratie overeenkomstig de door de Organisatie opgestelde richtlijnen worden goedgekeurd.”

DEEL B

WATERDICHTTE INDELING EN STABILITEIT

Het volgende nieuwe voorschrift 17-1 wordt toegevoegd na het bestaande voorschrift 17:

„Voorschrift 17-1

Openingen in de scheepshuid onder het schottendek van passagiersschepen en het vrijboorddek van vrachtschepen

Onverminderd de vereisten van voorschrift 17, moeten schepen gebouwd op of na 1 juli 1998 voldoen aan de vereisten van voorschrift 17, waarbij een verwijzing naar „indompelingsgrenslijn” moet worden geïnterpreteerd als een verwijzing naar het schottendek van passagiersschepen en het vrijboorddek van vrachtschepen.”

DEEL C

MACHINE-INSTALLATIES

Voorschrift 26

Algemeen

3. De volgende nieuwe paragrafen 9, 10 en 11 worden toegevoegd na de bestaande paragraaf 8:

„9 Niet-metalen expansieverbindingsstukken in leidingsystemen, indien door het scheepsboord gevoerd waarbij zowel de doorvoering als het niet-metalen expansieverbindingsstuk zich onder de hoogst gelegen lastlijn bevinden, moeten worden geïnspecteerd in het kader van de in voorschrift I/10(a) voorgeschreven onderzoeken en zonodig worden vervangen, of zo vaak worden vervangen als aanbevolen door de fabrikant.

10 Bedienings- en onderhoudsinstructies en technische tekeningen van de werktuigkundige installaties en uitrusting van het schip die essentieel zijn voor de veilige bedrijfsvoering aan boord moeten zijn opgesteld in een taal die begrijpelijk is voor de officieren en

bemanningsleden die deze informatie moeten begrijpen voor de uitvoering van hun taken.

11 De plaatsing en inrichting van luchtpijpen voor de brandstofoliedag-, brandstofoliebezink- en smeerolietanks moeten zodanig zijn dat indien een luchtpijp breekt, niet direct het risico ontstaat dat overkomend zeewater of regenwater binnendringen. Twee brandstofoliedagtanks voor elk type brandstof dat aan boord wordt gebruikt voor de voortstuwing en vitale systemen of gelijkwaardige inrichtingen moeten aanwezig zijn op elk nieuw schip met een capaciteit om de voortstuwingsinstallatie bij maximum continu vermogen en een normale operationele belasting van de elektrische installatie tijdens zeebedrijf tenminste acht uur in bedrijf te houden. Deze paragraaf is alleen van toepassing op schepen gebouwd op of na 1 juli 1998.”

Voorschrift 31

Bediening van de werktuiglijke installaties

4. De volgende nieuwe paragraaf 5 wordt toegevoegd na de bestaande paragraaf 4:

„5. Schepen gebouwd op of na 1 juli 1998, moeten als volgt voldoen aan de vereisten van de paragrafen 1 tot en met 4, als gewijzigd:

.1 paragraaf 1 wordt vervangen door:

„1. Hoofd- en hulpwerktuigen die essentieel zijn voor de voortstuwing, bediening en veiligheid van het schip moeten zijn voorzien van doeltreffende middelen voor het in werking stellen en bedienen ervan. Alle bedieningssystemen die essentieel zijn voor de voortstuwing, bediening en veiligheid van het schip moeten onafhankelijk zijn of zodanig zijn ontworpen dat storing van een systeem niet leidt tot verstoring van het functioneren van een ander systeem.”;

.2 in de tweede en derde regel van paragraaf 2 worden de woorden „en het de bedoeling is dat de ruimten voor machines zijn bemand” geschrapt;

.3 de eerste zin van paragraaf 2.2 wordt vervangen door:

„2 De bediening moet, voor elke schroef apart, plaatsvinden door één bedieningssysteem, waarbij alle gerelateerde bedieningshandelingen, waar nodig met inbegrip van die van voorzieningen ter voorkoming van overbelasting van de voortstuwingsinstallatie, automatisch worden uitgevoerd.”;

.4 paragraaf 2.4 wordt vervangen door:

„4 Manoeuvrerorders vanaf de brug moeten worden aangegeven in de controlekamer van de hoofdvoortstuwingsinstallatie en op de manoeuvreerstand.”;

- .5 aan het einde van paragraaf 2.6 wordt de volgende nieuwe zin toegevoegd:
„Het moet voorts mogelijk zijn de hulpwerktuigen die essentieel zijn voor de voortstuwing en veiligheid van het schip op of bij de desbetreffende werktuigen te bedienen”;
en
- .6 de paragrafen 2.8, 2.8.1 en 2.8.2 worden vervangen door:
„8 Op de brug, in de controlekamer van de hoofdvoortstuwingsinstallatie en op de manoeuvreerstand moeten aanwijsinstrumenten aanwezig zijn voor:
.8.1 schroeftoerental en -draairichting, in geval van vaste schroeven; en
.8.2 schroeftoerental en spoed in geval van verstelbare schroeven;”.

DEEL D

ELEKTRISCHE INSTALLATIES

Voorschrift 41

Elektrische hoofdkrachtbron en verlichtingsinstallaties

5 De volgende nieuwe paragraaf 5 wordt toegevoegd na de bestaande paragraaf 4:

- „5 Schepen gebouwd op of na 1 juli 1998:
 - .1 moeten in aanvulling op de paragrafen 1 tot en met 3, voldoen aan de volgende eisen:
 - .1.1 indien de elektrische hoofdkrachtbron nodig is voor de voortstuwing en besturing van het schip, moet het systeem zodanig zijn geplaatst en ingericht dat de stroomvoorziening voor de uitrusting die nodig is voor de voortstuwing, besturing en de veiligheid van het schip wordt gehandhaafd of onmiddellijk hersteld, indien een van de in bedrijf zijnde generatoren uitvalt;
 - .1.2 inrichtingen om de belasting te verlagen of gelijkwaardige voorzieningen moeten aanwezig zijn om de door dit voorschrift vereiste generatoren te beschermen tegen langdurige overbelasting;
 - .1.3 waar de elektrische hoofdkrachtbron nodig is voor de voortstuwing van het schip, moet het hoofdrailsysteem zijn onderverdeeld in ten minste twee delen die normaal met elkaar moeten zijn verbonden door middel van twee scheidingsschakelaars of andere goedgekeurde middelen; de aansluitingen van de generatoraggregaten en andere dubbel uitgevoerde uitrustingen moeten, voor zover uitvoerbaar, gelijkelijk over de delen zijn verdeeld; en

.2 hoeven niet te voldoen aan paragraaf 4.”

Voorschrift 42

Elektrische noodkrachtbron op passagiersschepen

6. De volgende nieuwe paragraaf 3.4 wordt toegevoegd na de bestaande paragraaf 3.3:

„3.4 Voor schepen gebouwd op of na 1 juli 1998, waarvoor elektrisch vermogen nodig is voor herstel van de voortstuwing, moet het vermogen voldoende zijn om de voortstuwing van het schip te herstellen, eventueel met andere werktuigen, vanuit dood-schip-toestand binnen 30 minuten na een uitval.”

Voorschrift 43

Elektrische noodkrachtbron op vrachtschepen

7. De volgende nieuwe paragraaf 3.4 wordt toegevoegd na de bestaande paragraaf 3.3:

„3.4 Voor schepen gebouwd op of na 1 juli 1998, waarvoor elektrisch vermogen nodig is voor herstel van de voortstuwing, moet het vermogen voldoende zijn om de voortstuwing van het schip te herstellen, eventueel met andere werktuigen, vanuit een dood-schip-toestand binnen 30 minuten na een uitval.”

HOOFDSTUK II-2

BOUW – BESCHERMING TEGEN, ALSMEDE OPSPORING EN
BLUSSEN VAN BRAND

DEEL A

ALGEMEEN

Voorschrift 1

Toepassing

- 8 De bestaande paragraaf 1.1 wordt vervangen door:
„1.1 Dit Hoofdstuk is, tenzij uitdrukkelijk anders is bepaald, van toepassing op schepen waarvan de kiel is gelegd of waarvan de bouw zich in een soortgelijk stadium bevindt op of na 1 juli 1998.”
- 9 De bestaande paragraaf 1.3.2 wordt vervangen door:
„ 2 wordt verstaan onder „*alle schepen*”: *schepen gebouwd vóór, op of na 1 juli 1998.*”
- 10 De bestaande paragraaf 2 wordt vervangen door:

„2 Tenzij uitdrukkelijk anders bepaald, draagt de Administratie er zorg voor dat schepen gebouwd voor 1 juli 1998 voldoen aan de voorschriften die van toepassing zijn krachtens Hoofdstuk II-2 van het Internationaal Verdrag voor de beveiliging van mensens levens op zee, 1974, zoals gewijzigd door resoluties MSC.I(XLV), MSC.6(48), MSC.13(57), MSC.22(59), MSC.24(60), MSC.27(61) en MSC.31(63).”

11 In paragraaf 3.1 wordt de uitdrukking „1 juli 1986” vervangen door „1 juli 1998”.

Voorschrift 3

Omschrijvingen

- 12 De bestaande paragraaf 1 wordt vervangen door:
 „1 Onbrandbaar materiaal: een materiaal dat noch brandt, noch ontvlambare gassen in voldoende hoeveelheid afgeeft om bij verhitting tot ongeveer 750°C tot zelfontbranding over te gaan, hetgeen moet worden aangetoond overeenkomstig de Code inzake brandbeproevingprocedures. Elk ander materiaal is brandbaar materiaal.”
- 13 De bestaande paragraaf 2 wordt vervangen door:
 „2 Een standaard brandproef: een proef waarbij de gedeelten van de betrokken schotten en dekken in een proefoven worden blootgesteld aan temperaturen die ongeveer overeenkomen met de standaard tijd-temperatuurkromme. De testmethodes moeten in overeenstemming zijn met de Code inzake brandbeproevingprocedures.”
- 14 In paragraaf 3.4 wordt „139°C” vervangen door „140°C”.
- 15 De bestaande paragraaf 3.5 wordt vervangen door:
 „5 De Administratie eist beproeving, in overeenstemming met de Code inzake brandbeproevingprocedures, van een prototype van een schot of een dek, teneinde zekerheid te verkrijgen dat deze voldoen aan bovengenoemde eisen omtrent het doorlaten van rook en vlammen en temperatuurstijging.”
- 16 In paragraaf 4.2 wordt „139°C” vervangen door „140°C”.
- 17 De bestaande paragraaf 4.4 wordt vervangen door:
 „4 De Administratie eist beproeving van een prototype van een schot, in overeenstemming met de Code inzake brandbeproevingprocedures, teneinde zekerheid te verkrijgen dat dit voldoet aan bovengenoemde eisen omtrent het doorlaten van vlammen en temperatuurstijging.”
- 18 De bestaande paragraaf 8 wordt vervangen door:
 „8. Lage vlamuitbreiding: eigenschap die aangeeft dat het aldus

omschreven oppervlak de vlamuitbreiding op voldoende wijze kan beperken; deze eigenschap moet worden aangetoond in overeenstemming met de Code inzake brandbeproevingprocedures.”

- 19 De bestaande paragraaf 22-1 wordt vervangen door:
„22-1 Centraal controlestation: een controlestation waarin de volgende controle- en meldfuncties zijn samengebracht:
.1 vast aangebrachte brandontdekkings- en alarmsystemen;
.2 automatische sprinkler-, brandontdekkings- en alarmsystemen;
.3 meldpanelen voor branddeuren;
.4 het sluiten van branddeuren;
.5 meldpanelen voor waterdichte deuren;
.6 het sluiten van waterdichte deuren;
.7 ventilatoren;
.8 algemene alarmen/brandalarmen;
.9 communicatiesystemen, met inbegrip van telefoons; en
.10 microfoons voor het scheepsomroepstelsel.”
- 20 De bestaande paragraaf 23.3 wordt vervangen door:
„3 alle draperieën, gordijnen en andere opgehangen textielstoffen eigenschappen van weerstand tegen verspreiding van vlammen bezitten die niet slechter zijn dan die van wollen stof met een gewicht van 0,8 kilogram per vierkante meter; dit moet worden aangetoond in overeenstemming met de Code inzake brandbeproevingprocedures.”
- 21 De bestaande paragraaf 23.4 wordt vervangen door:
„4 alle vloerbedekkingen een laag vlamverspreidend vermogen hebben.”
- 22 De bestaande paragraaf 23.6 wordt vervangen door:
„6 alle gestoffeerde meubelen hoedanigheden van weerstand tegen ontvlaming en de verspreiding van vlammen bezitten; dit moet worden aangetoond in overeenstemming met de Code inzake brandbeproevingprocedures.”
- 23 De volgende nieuwe paragraaf 23.7 wordt toegevoegd:
„7 alle beddengoed hoedanigheden van weerstand tegen ontvlaming en de verspreiding van vlammen bezitten; dit moet worden aangetoond in overeenstemming met de Code inzake brandbeproevingprocedures.”
- 24 De volgende nieuwe paragraaf 34 wordt toegevoegd:
„34 De Code inzake brandbeproevingprocedures is de Internationale Code voor de toepassing van brandbeproevingprocedures aangenomen door de Maritieme Veiligheidscommissie van de Organisatie door resolutie MSC.61(67), eventueel als gewijzigd door de Organisatie, op voorwaarde dat deze wijzigingen worden aangenomen, in werking worden gesteld en van kracht worden

overeenkomstig het bepaalde van artikel VIII van dit Verdrag betreffende de procedure voor wijziging die van toepassing is op de Bijlage, met uitzondering van Hoofdstuk I.”

Voorschrift 12

Automatische sprinkler-, brandontdekkings- en brandalarminstallaties

25 De bestaande paragraaf 1.2 wordt vervangen door:

„1.2 In elke sprinklersectie moeten middelen zijn aangebracht voor het automatisch geven van zichtbare en hoorbare alarmsignalen op één of meer alarmpanelen, wanneer een sprinkler gaat werken. Deze alarminstallaties moeten zodanig zijn dat eventueel in de installatie optredende defecten worden aangegeven. Deze panelen moeten aangeven in welke door de installatie beschermde sectie brand is uitgebroken en moeten gecentraliseerd zijn op de navigatiebrug en bovendien moeten zichtbare en hoorbare alarmen van deze panelen worden aangebracht op een andere plaats dan op de navigatiebrug, teneinde te verzekeren dat de brandmelding onmiddellijk wordt ontvangen door de bemanning.”

26 De bestaande paragrafen 1.2.1 en 1.2.2 worden geschrapt.

Voorschrift 16

Ventilatiesystemen op andere schepen dan passagiersschepen die meer dan 36 passagiers vervoeren

27 De bestaande tekst van paragraaf 1.1 wordt vervangen door:

„1 deze kanalen moeten zijn vervaardigd van een materiaal met een laag vlamverspreidend vermogen.”

28 De volgende nieuwe paragraaf 11 wordt toegevoegd:

„11 De volgende systemen moeten worden beproefd in overeenstemming met de Code inzake brandbeproevingprocedures:

.1 brandkleppen met inbegrip van de bijbehorende bedieningsmiddelen; en

.2 kanaaldoorboringen van schotten van klasse „A”. Indien stalen ontmantelingskokers direct zijn aangesloten op ventilatiekanalen met behulp van geklonken of geschroefde flenzen of doorlassen, is de beproeving niet vereist.”

Voorschrift 17

Brandweeruitrusting

29 Aan het einde van paragraaf 3.1.1 wordt de volgende zin toegevoegd:

„voor ingesloten trapruimten die afzonderlijke verticale hoofdsecties vormen en voor de verticale hoofdsecties aan de voor- en achterzijde van het schip waar zich geen ruimten van de categorieën 26.2.2.(6), (7), (8) of (12) bevinden, zijn echter geen aanvullende brandweeruitrustingen vereist.”

Voorschrift 18

Diversen

30 In de tekst tussen aanhalingstekens volgend op de titel van het voorschrift worden de woorden „en 8” in de eerste zin geschrapt en wordt de volgende zin toegevoegd:

„Paragraaf 8 van dit voorschrift is van toepassing op schepen gebouwd op of na 1 juli 1998.”

31 De bestaande paragraaf 8 wordt vervangen door:

„8 Voorzieningen voor heliportfaciliteiten moeten voldoen aan de normen van de Organisatie.”

DEEL B

BEVEILIGINGSMAATREGELEN TEGEN BRAND VOOR PASSAGIERSSCHEPEN

Voorschrift 24

Verticale hoofdsecties en horizontale secties

32 De derde zin van de bestaande paragraaf 1.1 wordt vervangen door:

„Indien zich aan één zijde van het schot een ruimte van categorie 26.2.2(5), (9) of (10) bevindt of indien zich aan weerszijden van het schot brandstofoliel tanks bevinden, kan de norm worden verlaagd naar A-0.”

Voorschrift 26

Brandwerendheid van schotten en dekken op schepen die meer dan 36 passagiers vervoeren

33 De woorden „26.1 tot en met 26.4” in paragraaf 1 worden vervangen door „26.1 en 26.2” en noot „d” wordt toegevoegd in de vierde rij onder de kolommen 6, 7, 8 en 9 van tabel 26.1 en de volgende noot wordt toegevoegd aan tabel 26.1:

„d Wanneer zich ruimten van de categorieën 6, 7, 8 en 9 geheel binnen de uiterste begrenzingen van het verzamelstation bevinden, mogen de schotten van deze ruimten brandwerendheidsklasse B-0 hebben.” Bedieningsplaatsen voor geluids-

beeld- en lichtinstallaties kunnen worden beschouwd als onderdeel van het verzamelstation.”

Voorschrift 28

Voorzieningen voor ontsnapping

34 Aan het einde van paragraaf 1.10 wordt „” vervangen door „; en”.

35 De volgende nieuwe subparagraaf .11 wordt toegevoegd:

„.11 Aan boord van alle passagiersschepen die meer dan 36 passagiers vervoeren, zijn de vereisten van 1.10 en het voorschrift 41-2.4.7 ook van toepassing op die delen van het schip waar de bemanningsverblijven zijn ondergebracht.”

Voorschrift 30

Openingen in schotten van klasse „A”

36 De bestaande paragraaf 4 wordt vervangen door:

„4. Branddeuren in schotten van verticale hoofdsecties, schotten van kombuizen en ingesloten trapruimten, andere dan werktuiglijk bewogen waterdichte deuren en deuren die onder normale omstandigheden op slot zijn, moeten voldoen aan de volgende vereisten:

.1 de deuren moeten zelfsluitend zijn en in staat te sluiten tegen een hellingshoek van maximaal 3,5° in;

.2 de tijd waarin brandwerende draaideuren bij benadering gesloten kunnen worden mag vanaf het moment dat de deuren beginnen te bewegen maximaal 40 s en moet minimaal 10 s bedragen bij een rechtliggend schip. De uniforme snelheid waarmee brandwerende schuifdeuren bij benadering gesloten kunnen worden mag maximaal 0,2 m/s en minimaal 0,1 m/s zijn bij een rechtliggend schip.

.3 de deuren moeten op afstand kunnen worden gedeblokkeerd vanuit het doorlopend bemane centraal controlestation, hetzij gelijktijdig, hetzij groepsgewijs en moeten tevens afzonderlijk kunnen worden gedeblokkeerd vanaf een plaats aan beide zijden van de deur. De deblokkeringsschakelaars moeten voorzien zijn van een in- en uitschakelmechanisme zodat automatische herinschakeling wordt voorkomen;

.4 deurhaken die niet vanuit een centraal controlestation kunnen worden gedeblokkeerd, zijn verboden;

.5 een deur die op afstand is gesloten vanaf het centrale controlestation moet aan beide zijden van de deur heropend kunnen worden door bediening ter plaatse. Na opening door middel van bediening ter plaatse, moet de deur automatisch hersluiten;

.6 op het brandcontrolepaneel in het doorlopend bemande centrale controlestation moet worden aangegeven of iedere op afstand gedeblokkeerde deur gesloten is;

.7 het mechanisme dat de deur deblokkeert, moet zo zijn ontworpen dat de deur automatisch sluit indien het controlesysteem of de elektrische hoofdkrachtbron in het ongerede raakt;

.8 plaatselijke energieaccumulatoren voor werktuiglijk bewogen deuren moeten zijn aangebracht in de onmiddellijke nabijheid van de deuren zodat de deuren ten minste tien maal kunnen worden bediend (geheel geopend en gesloten) met gebruikmaking van de bedieningsmiddelen ter plaatse, nadat het controlesysteem of de elektrische hoofdkrachtbron in het ongerede is geraakt;

.9 indien het controlesysteem of de elektrische hoofdkrachtbron bij één deur in het ongerede raakt, mag dit geen nadelige invloed hebben op het veilig functioneren van de andere deuren;

.10 op afstand gedeblokkeerde schuifdeuren of werktuiglijk bewogen deuren moeten uitgerust zijn met een alarm dat minstens 5 s doch hoogstens 10 s een hoorbaar signaal geeft nadat de deur is gedeblokkeerd vanuit het centraal controlestation en voordat de deur begint te bewegen en dat dit signaal blijft geven totdat de deur volledig gesloten is;

.11 een deur die zo is ontworpen dat deze weer open gaat wanneer deze in aanraking komt met een voorwerp tijdens het sluiten, mag vanaf het contactpunt maximaal 1 meter opnieuw open gaan;

.12 dubbele deuren die zijn uitgerust met een klink die noodzakelijk is voor hun brandwerend vermogen, moeten een klink hebben die automatisch in werking wordt gesteld door de bediening van de deuren wanneer deze zijn gedeblokkeerd door het systeem;

.13 deuren die rechtstreeks toegang geven tot ruimten van bijzondere aard en die werktuiglijk worden bediend en automatisch gesloten, behoeven niet te zijn uitgerust met de alarmen en op afstand bediende deblokkeringsmechanismen vereist in .3 en .10;

.14 de componenten van het controlesysteem ter plaatse moeten bereikbaar zijn voor onderhoud en aanpassing; en

.15 werktuiglijk bewogen deuren moeten zijn voorzien van een goedgekeurd controlesysteem dat kan functioneren in geval van brand; dit moet worden vastgesteld in overeenstemming met de Code inzake brandbeproevingprocedures. Dit systeem moet voldoen aan de volgende eisen:

.15.1 het controlesysteem moet in staat zijn de deur te bedienen bij een temperatuur van minimaal 200°C gedurende

minimaal 60 minuten, aangedreven door de krachtvoorziening;
 .15.2 de krachtvoorziening voor alle overige deuren die niet zijn blootgesteld aan de brand, mag niet verminderen; en
 .15.3 bij temperaturen boven 200°C moet het controlesysteem automatisch worden afgesloten van de krachtvoorziening en de deur gesloten kunnen houden tot minimaal 945°C.”

37 De tweede zin van de bestaande paragraaf 6 wordt vervangen door:

„De voorschriften inzake brandwerendheid van klasse A voor de buitenste begrenzingswanden van het schip zijn niet van toepassing op buitendeuren, behalve op deuren in bovenbouwen en dekhuizen die zich bevinden tegenover reddingsmiddelen, inschepings- en verzamelplaatsen buiten, buitentrappen en open dekken die voor ontsnappingsroutes worden gebruikt. Buitendeuren van ingesloten trapruimten hoeven niet te voldoen aan dit vereiste.”

Voorschrift 32

Ventilatiesystemen

38 De bestaande paragraaf 1.1 wordt vervangen door:

„1.1 Het ventilatiesysteem van een passagiersschip dat meer dan 36 passagiers vervoert, moet, behalve aan dit deel van dit voorschrift, ook voldoen aan de vereisten vervat in de voorschriften 16.2 tot en met 16.6, 16.8, 16.9 en 16.11.”

39 De bestaande paragraaf 1.4.3.1 wordt vervangen door:

„3.1 Het kanaal moet zijn geconstrueerd uit een materiaal met een laag vlamverspreidend vermogen;”

Voorschrift 34

Beperkt gebruikt van brandbaar materiaal

40 De bestaande paragraaf 2 wordt vervangen door:

„2 Dampwerende lagen en kleefstoffen gebruikt bij isolatie, alsmede de isolatie van pijpleidingen voor koud-watersystemen, behoeven niet onbrandbaar te zijn, doch moeten tot het praktisch mogelijke minimum worden beperkt en het vlamverspreidend vermogen van de blootgestelde oppervlakken ervan moet laag zijn.”

41 De bestaande paragraaf 7 wordt vervangen door:

„7 Verven, vernissen en andere stoffen voor afwerking gebruikt op blootgestelde inwendige oppervlakken moeten geen overma-

tige hoeveelheden rook en giftige stoffen kunnen voortbrengen; dit moet worden vastgesteld in overeenstemming met de Code inzake brandbeproevingprocedures.”

- 42 De bestaande paragraaf 8 wordt vervangen door:
 „8 De onderste laag van dekbedekkingen, indien aangebracht in ruimten voor accommodatie, dienstruimten en controlestations, moet van goedgekeurd materiaal zijn dat niet gemakkelijk kan ontbranden, of aanleiding geeft tot vergiftigings- of explosiegevaar bij verhoogde temperaturen; dit moet worden vastgesteld in overeenstemming met de Code inzake brandbeproevingprocedures.”

Voorschrift 37

Bescherming van ruimten van bijzondere aard

- 43 In paragraaf 1.2.1 wordt de volgende derde zin toegevoegd:
 „Indien zich onder een ruimte van bijzondere aard brandstofolietanks bevinden, kan de brandwerendheid van het dek tussen deze ruimten worden verlaagd naar A-0.”
- 44 De volgende nieuwe paragraaf 4 wordt toegevoegd:
 „4 Permanente ventilatie-openingen
 Permanente openingen in de scheepshuid, de eindschotten of in het bovengelegen dek van ruimten van bijzondere aard moeten zodanig zijn geplaatst dat brand in een ruimte van bijzondere aard geen gevaar oplevert voor bergplaatsen en inschepingsplaatsen voor groepsreddingmiddelen, ruimten voor accommodatie, dienstruimten en controlestations in de bovenbouwen en dekhuzen boven de ruimten van bijzondere aard.”

Voorschrift 38

Bescherming van andere laadruimten dan ruimten van bijzondere aard bestemd voor het vervoeren van motorvoertuigen met brandstof in de tank voor eigen aandrijving

- 45 De volgende nieuwe paragrafen 5 en 6 worden toegevoegd:
 „5. Permanente ventilatie-openingen
 Permanente openingen in de scheepshuid, de eindschotten of in het bovengelegen dek van laadruimten moeten zodanig zijn geplaatst dat brand in de laadruimte geen gevaar oplevert voor bergplaatsen en inschepingsstations voor groepsreddingmiddelen, ruimten voor accommodatie, dienstruimten en controlestations in de bovenbouwen en dekhuzen boven de laadruimten.
6. Structurele bescherming
 „1.1 De ro-ro laadruimten van schepen gebouwd op of na 1 juli

1998, moeten voldoen aan de vereisten van de paragrafen 1.1, 1.2, en 1.3 van voorschrift 38-1.”

46 Het volgende nieuwe voorschrift 38-1 wordt toegevoegd:

„Voorschrift 38-1

Bescherming van gesloten en open ro-ro laadruimten (anders dan ruimten van bijzondere aard en ro-ro laadruimten) waarin motorvoertuigen worden vervoerd met brandstof in de tank voor hun eigen aandrijving

1 Algemeen

1.1 De fundamentele beginselen die aan voorschrift 37.1.1 ten grondslag liggen zijn ook van toepassing op dit Voorschrift.

1.2 Op passagiersschepen die meer dan 36 passagiers vervoeren, moeten de begrenzingsschotten en dekken van gesloten en open ro-ro laadruimten worden geïsoleerd volgens de „A-60”-norm. Indien zich aan één zijde van het schot een ruimte van categorie 26.2.2(5), (9) of (10) bevindt, kan de norm echter worden verlaagd naar A-0.” Indien zich onder een ro-ro laadruimte brandstoflietanks bevinden, kan de brandwerendheid van het dek tussen deze ruimten worden verlaagd naar A-0.”

1.3 Op passagiersschepen die maximaal 36 passagiers vervoeren, moeten de begrenzingsschotten en dekken van gesloten en open ro-ro laadruimten het brandwerende vermogen hebben dat in tabel 27.1 wordt voorgeschreven voor ruimten van categorie (8) en de horizontale begrenzingen die in tabel 27.2 worden voorgeschreven voor ruimten van categorie (8).

1.4 Permanente openingen in de scheepshuid, de eindschotten of in het bovengelegen dek van open en gesloten ro-ro laadruimten moeten zodanig zijn geplaatst dat brand in de laadruimte geen gevaar oplevert voor bergplaatsen en inschepingsstations voor groepsreddingmiddelen, ruimten voor accommodatie, dienruimten en controlestations in de bovenbouwen en dekhuisen boven de laadruimten.”

2 Gesloten ro-ro laadruimten

Gesloten ro-ro laadruimten moeten voldoen aan de vereisten van Voorschrift 38, met uitzondering van paragraaf 4 van dat Voorschrift.

3 Open ro-ro laadruimten

Open ro-ro laadruimten moeten voldoen aan de vereisten van Voorschrift 37.1.3, 37.2.1, 38.1, met dien verstande dat een rookontdekkingsinstallatie voor het nemen van luchtmonsters niet is toegestaan, en 38.2.3.”

DEEL C

BEVEILIGINGSMAAATREGELEN TEGEN BRAND VOOR VRACHTSCHEPEN

Voorschrift 49

Beperkt gebruikt van brandbare materialen

- 47 De bestaande paragraaf 2 wordt vervangen door:
 „2 Verven, vernissen en andere stoffen voor afwerking gebruikt op blootgestelde inwendige oppervlakken moeten geen overmatige hoeveelheden rook en giftige gassen of dampen kunnen voortbrengen; dit moet worden vastgesteld in overeenstemming met de Code inzake brandbeproevingprocedures.”
- 48 De bestaande paragraaf 3 wordt vervangen door:
 „3 De onderste laag van dekbedekkingen in ruimten voor accommodatie, dienruimten en controlestations moet, indien aangebracht, van goedgekeurd materiaal zijn dat niet gemakkelijk kan ontbranden, of aanleiding geeft tot vergiftigings- of explosiegevaar bij verhoogde temperaturen; dit moet worden vastgesteld in overeenstemming met de Code inzake brandbeproevingprocedures.”

Voorschrift 50

Constructiedetails

- 49 De bestaande paragraaf 3.1 wordt vervangen door:
 „3.1 Behalve in laadruimten of koel- en vrieskamers van dienruimten, moeten isolatiematerialen onbrandbaar zijn. Dampwerende lagen en kleefstoffen die worden gebruikt in samenhang met isolatiematerialen, alsmede de isolatie van pijpleidingen voor koud-watersystemen, behoeven niet van onbrandbaar materiaal te zijn vervaardigd, maar het gebruik ervan moet tot het praktisch mogelijke minimum worden beperkt en het vlamverspreidend vermogen van hun blootgestelde oppervlakken moet laag zijn.”

Voorschrift 53

Inrichtingen voor brandbescherming in laadruimten

- 50 De bestaande paragrafen 1.2 en 1.3 worden vervangen door:
 „1.2 Niettegenstaande het bepaalde in paragraaf 1.1, moet elke laadruimte van een schip dat wordt gebruikt voor het vervoer van gevaarlijke stoffen aan dek of in laadruimten zijn voorzien van een vast aangebrachte brandblusinstallatie met verstikkend gas die voldoet aan het bepaalde in Voorschrift 5 of van een brandblus-

installatie die naar het oordeel van de Administratie gelijkwaardige bescherming biedt aan de vervoerde ladingen.

1.3 De Administratie kan ontheffing van de in paragraaf 1.1 en 1.2 vervatte eisen verlenen ten aanzien van laadruimten van een schip, indien dit is gebouwd en uitsluitend is bestemd voor het vervoer van erts, kolen, graan, niet-gedroogd hout, onbrandbare ladingen of ladingen die, naar het oordeel van de Administratie, weinig brandgevaarlijk zijn. Zulke ontheffingen kunnen alleen worden verleend indien het schip is uitgerust met stalen luiken en doeltreffende middelen voor het afsluiten van alle ventilatie-openingen en andere openingen die naar de laadruimten voeren. Indien zulke ontheffingen worden verleend, moet de Administratie een certificaat van ontheffing afgeven, ongeacht de datum van bouw van het onderhavige schip, in overeenstemming met Voorschrift I/12(a)(vi) en erop toezien dat de lijst van ladingen die het schip mag vervoeren aan het certificaat van ontheffing wordt gehecht.”

- 51 De volgende nieuwe paragraaf 2.5 wordt toegevoegd:
 „2.5 Permanente openingen in de scheepshuid, de eindschotten of in het bovengelegen dek van open en gesloten ro-ro laadruimten moeten zodanig zijn geplaatst dat brand in de laadruimte geen gevaar oplevert voor bergplaatsen en inschepingsstations voor groepsreddingmiddelen, ruimten voor accommodatie, dienstruimten en controlestations in de bovenbouwen en dekhuzen boven de laadruimten.”

Voorschrift 54

Bijzondere vereisten voor schepen die gevaarlijke stoffen vervoeren

- 52 De volgende nieuwe paragraaf 2.4.3 wordt toegevoegd:
 „2.4.3 In besloten laadruimten bestemd voor het vervoer van vaste gevaarlijke stoffen in bulk moet natuurlijke ventilatie worden aangebracht, indien geen voorziening voor mechanische ventilatie aanwezig is.”
- 53 De volgende nieuwe paragrafen 2.10 en 2.11 worden toegevoegd:
 „2.10 Op schepen met ro-ro laadruimten moet een afscheiding zijn aangebracht tussen een gesloten ro-ro laadruimte en een aangrenzende open ro-ro laadruimte. De afscheiding moet zodanig zijn dat de doorstroming van gevaarlijke gassen en vloeistoffen tussen dergelijke ruimten tot een minimum wordt beperkt. Een dergelijke afscheiding hoeft niet te worden aangebracht indien de ro-ro laadruimte over de volle lengte wordt beschouwd als een gesloten laadruimte, en voldoet aan de relevante vereisten van dit Voorschrift.
 2.11 Op schepen met ro-ro laadruimten moet een afscheiding zijn aangebracht tussen een gesloten ro-ro laadruimte en het bovenste

dek. De afscheiding moet zodanig zijn dat de doorstroming van gevaarlijke gassen en vloeistoffen tussen dergelijke ruimten tot een minimum wordt beperkt. Een dergelijke afscheiding hoeft niet te worden aangebracht indien de voorzieningen voor de gesloten ro-ro laadruimten in overeenstemming zijn met hetgeen vereist wordt voor de gevaarlijke stoffen die worden vervoerd op het aangrenzende, aan weer en wind blootgestelde dek.”

Tabel 54.1 – Toepassing van de eisen op de verschillende methoden van vervoer van gevaarlijke stoffen op schepen en in laadruimten

- 54 De bestaande tabel 54.1 wordt vervangen door:
„Waar in Tabel 54.1 een „X” staat aangegeven betekent dit dat deze eis geldt voor alle klassen gevaarlijke stoffen als vermeld in de desbetreffende kolom van tabel 54.3, behoudens de vermelding in de voetnoten.

Voorschrift 54.1.2	Aan weer en wind blootgestelde dekken 1 tot en met 5	.1 Niet specifiek ontworpen	.2 Laadruimten voor containers	.3		.4 Vaste gevaarlijke stoffen in bulk	.5 Aan boord vervoerde lichters
				Gesloten ro-ro laadruimten	Open ro-ro laadruimten		
Voorschrift 54.2							
.1.1	X	X	X	X	X	Voor de toepassing van de in voorschrift 54 gestelde eisen op verschillende klassen gevaarlijke stoffen zie tabel 54.2	X
.1.2	X	X	X	X	X		-
.1.3	-	X	X	X	X		X
.1.4	-	X	X	X	X		X
.2	-	X	X	X	X		X ⁴⁾
.3	-	X	X	X	-		X ⁴⁾
.4.1	-	X	X ¹⁾	X	-		X ⁴⁾
.4.2	-	X	X ¹⁾	X	-		X ⁴⁾
.5	-	-	X	X	-		-
.6.1	X	X	X	X	X		-
.6.2	X	X	X	X	X		-
.7	X	X	-	-	X		-
.8	X	X	X ²⁾	X	X		-
.9	-	-	-	X ³⁾	X		-

¹⁾ Voor klassen 4 en 5.1 niet van toepassing op gesloten vrachtcontainers.
Voor klassen 2, 3, 6.1 en 8 kan de ventilatiecapaciteit, wanneer de stoffen in gesloten vrachtcontainers worden vervoerd, worden verminderd tot niet minder

dan twee luchtwisselingen. Voor de toepassing van deze eisen wordt een losse tank als gesloten vrachtcontainer beschouwd.

2) Uitsluitend van toepassing op dekken.

3) Uitsluitend van toepassing op gesloten ro-ro laadruimten, die niet kunnen worden afgedicht.

4) In het speciale geval waarin de lichters ontvlambare dampen kunnen bevatten, of indien door middel van aan de lichters verbonden ventilatiekanalen ontvlambare dampen kunnen worden afgevoerd naar een veilige ruimte buiten de ruimte waarin de lichters worden vervoerd, kan ten genoegen van de Administratie verlichting of vrijstelling van deze eisen worden verleend.

5) Ruimten van bijzondere aard moeten worden behandeld als gesloten ro-ro ruimten indien gevaarlijke stoffen worden vervoerd.”

Tabel 54.2 – Toepassing van de eisen op verschillende klassen gevaarlijke stoffen voor schepen en laadruimten waarin vaste gevaarlijke stoffen in bulk worden vervoerd

55 De bestaande tabel 54.2 wordt vervangen door:

Klasse	4.1	4.2	4.3 ⁶⁾	5.1	6.1	8	9
Voorschrift							
54.2.1.1	X	X	–	X	–	–	X
54.2.1.2	X	X	–	X	–	–	X
54.2.2	X	X ⁷⁾	X	X ⁸⁾	–	–	X ⁸⁾
54.2.4.1	–	X ⁷⁾	X	–	–	–	
54.2.4.2	X ⁹⁾	X ⁷⁾	X	X ^{6, 9)}	–	–	X ^{7, 9)}
54.2.4.3	X	X	X	X	X	X	X
54.2.6	X	X	X	X	X	X	X
54.2.8	X	X	X	X ⁷⁾	–	–	X ¹⁰⁾

6) De gevaren van eventueel in bulk te vervoeren stoffen van deze klasse zijn zodanig dat de Administratie niet alleen aan de naleving van de in deze tabel opgesomde vereisten, maar ook aan de bouw en de uitrusting van het betrokken schip bijzondere aandacht moet schenken.

7) Alleen van toepassing op oliezaadkoek die extracten van oplosmiddelen bevat, op ammoniumnitraat en op ammoniumnitraat-houdende kunstmest.

8) Alleen van toepassing op ammoniumnitraat en ammoniumnitraat-houdende

kunstmest. Een mate van bescherming overeenkomstig de normen als vervat in Publicatie 79 van de Internationale Elektrotechnische Commissie: Elektrische apparatuur voor explosieve gasatmosferen, volstaat echter.

⁹⁾ Alleen geschikte gaaswanden zijn vereist.

¹⁰⁾ De eisen van de Code voor veilig vervoer van vaste lading in bulk (resolutie A.434.(XI), zoals gewijzigd) volstaan.

- ¹¹⁾ Indien „mechanisch geventileerde ruimten” worden vereist door de Internationale Maritieme Code voor Gevaarlijke Stoffen, zoals gewijzigd.
- ¹²⁾ In alle gevallen stuwen op een horizontale afstand van 3 m vanaf de begrenzingswanden van ruimten voor machines.
- ¹³⁾ Zie de Internationale Maritieme Code voor Gevaarlijke Stoffen.
- ¹⁴⁾ Al naar gelang de vervoerde goederen.”

DEEL D

BEVEILIGINGSMAATREGELEN TEGEN BRAND VOOR TANKSCHEPEN

Voorschrift 56

Ligging en afscheiding van ruimten

- 57 De zin onder de titel wordt vervangen door:
„(Dit Voorschrift is van toepassing op schepen gebouwd op of na 1 februari 1992, met dien verstande dat paragraaf 9 van toepassing is op schepen gebouwd op of na 1 juli 1998.)”
- 58 De bestaande paragraaf 7 wordt vervangen door:
„7. Buitenwanden van bovenbouwen en dekhuzen die ruimten voor accommodatie bevatten, met inbegrip van overstekende dekken, die zulke accommodatie ondersteunen, moeten worden vervaardigd van staal en geconstrueerd als schotten of dekken van klasse „A-60” over het gehele gedeelte van de wanden die tegenover het ladinggedeelte liggen en aan de buitenzijden over een lengte van 3 meter vanaf de laatste wand tegenover het ladinggedeelte. Op zijwanden van deze bovenbouwen en dekhuzen, moet de isolatie in de hoogterichting zover worden doorgetrokken als door de Administratie noodzakelijk wordt geacht.”
- 59 De tweede zin van de bestaande paragraaf 8.3 wordt vervangen door:
„Deze ramen en patrijspoorten, behalve ramen in het stuurhuis, moeten worden geconstrueerd volgens de klasse „A-60”.”
- 60 De volgende nieuwe paragraaf 9 wordt toegevoegd:
„9 Op elk schip waarop dit voorschrift van toepassing is en waar vanuit de pijpentunnel een permanente toegang is tot de hoofdpompkamer, moet een waterdichte deur worden geïnstalleerd die voldoet aan de vereisten van voorschrift II-1/25-9.2 en aan het onderstaande:
- .1 de waterdichte deur moet niet alleen vanaf de brug kunnen worden bediend, maar ook handmatig kunnen worden gesloten vanaf een positie buiten de ingang van de hoofdpompkamer; en
 - .2 de waterdichte deur moet gesloten blijven tijdens normaal bedrijf van het schip, tenzij toegang moet worden verkregen tot de pijpentunnel.”

Voorschrift 59

Ontluchting, uitdrijven van gassen, gasvrij maken en ventilatie

- 61 De volgende nieuwe paragraaf 1.2.3 wordt toegevoegd:
„3 een secundaire voorziening voor volledige ontlasting van damp, lucht of inertgasmengsels ter voorkoming van overdruk of onderdruk in geval van storing van de in 1.2.2. genoemde voorzieningen. Als alternatief mogen druksensoren worden geïnstalleerd in iedere tank die wordt beschermd door de door 1.2.2 vereiste voorziening met een monitorsysteem in de ladingcontrolekamer van het schip of de plaats vanwaar ladingoperaties normaliter worden uitgevoerd. Deze monitorapparatuur moet ook zijn voorzien van een alarmfaciliteit die wordt geactiveerd bij detectie van omstandigheden van over- of onderdruk binnen een tank.”
- 62 De bestaande paragraaf 1.3.2 wordt vervangen door:
„1.3.2 Wanneer de voorzieningen zijn gecombineerd met die voor andere ladingtanks, moeten hetzij afsluiters, hetzij andere aanvaardbare middelen zijn aangebracht om iedere ladingtank te kunnen isoleren. Wanneer er afsluiters zijn aangebracht, moeten deze zijn voorzien van een blokkeerinrichting met een slot waarvan de sleutel in beheer is bij de verantwoordelijke officier. Duidelijke standaardaanwijzingslampjes voor de operationele toestand van de afsluiters of andere acceptabele middelen moeten aanwezig zijn. Indien tanks zijn afgesloten, moet gewaarborgd zijn dat de desbetreffende afsluitkleppen worden geopend voordat wordt begonnen met het laden, ballasten of lossen van deze tanks. Bij iedere vorm van afsluiting moet de stroming die wordt veroorzaakt door temperatuurschommelingen in een ladingtank overeenkomstig paragraaf 1.2.1 steeds mogelijk blijven.”
- 63 De volgende nieuwe paragraaf 1.3.3 wordt toegevoegd:
„1.3.3 Indien een ladingtank of groep ladingtanks moet worden geladen en geballast of gelost, die is respectievelijk zijn afgesloten van een gemeenschappelijk ontluchtingssysteem, moet respectievelijk moeten deze ladingtank of ladingtanks worden voorzien van een beveiliging tegen overdruk of onderdruk als vereist in paragraaf 1.2.3.”
- 64 De volgende nieuwe paragraaf 1.11 wordt toegevoegd:
„1.11 Schepen gebouwd voor 1 juli 1998 moeten voldoen aan de vereisten van de paragrafen 1.2.3 en 1.3.3 op de datum van de eerstvolgende dokking na 1 juli 1998, maar uiterlijk op 1 juli 2001.”
- 65 De volgende nieuwe paragraaf 5 wordt toegevoegd:
„5 Indicatoren van brandbare gassen

Alle tankschepen moeten zijn voorzien van ten minste één draagbaar instrument voor het meten van brandbare gassen, alsmede van voldoende reservemateriaal. Geschikte middelen moeten aanwezig zijn voor de calibratie van deze instrumenten.”

Voorschrift 62

Inertgasinstallaties

66 In paragraaf 11.2.1 wordt de volgende zin toegevoegd aan het einde:

„Het gebruikte controle-systeem moet de operationele toestand van deze kleppen duidelijk weergeven.”

HOOFDSTUK V

VEILIGHEID VAN DE NAVIGATIE

67 Het bestaande voorschrift 15-1 wordt geschrapt.

HOOFDSTUK VII

VERVOER VAN GEVAARLIJKE STOFFEN

Voorschrift 2

Classificatie

68 „Klasse 6.1 – Vergiftige stoffen” wordt vervangen door:
„Klasse 6.1 – Giftige stoffen”

69 De woorden „Verschillende gevaarlijke stoffen, dat wil zeggen” in de bestaande tekst inzake Klasse 9 worden vervangen door:
„Verschillende gevaarlijke stoffen en goederen, dat wil zeggen”

Voorschrift 7

Ontploffbare stoffen aan boord van passagiersschepen

70 De volgende nieuwe paragraaf 1.5 wordt toegevoegd:

„5 goederen in samenladingsgroep N zijn alleen toegestaan op passagiersschepen, indien de totale netto massa van de explosieve stof niet meer bedraagt dan 50 kg per schip en er, afgezien van indeling 1.4, compatibiliteitsgroep S, geen andere explosieve stoffen worden vervoerd.”

Resolutie MSC.65(68) van 4 juni 1997

Bij Resolutie MSC.65(68) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 4 juni 1997 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 januari 1999 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 juli 1999 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

**Resolution MSC.65(68)
(adopted on 4 June 1997)**

Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

The maritime safety committee,

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as „the Convention”, concerning the procedures for amending the Annex to the Convention, other than the provisions of chapter I thereof,

Having considered, at its sixty-eighth session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 January 1999, unless, prior to that date, more than one third of the

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. Invites Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 1999 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex 2

Amendments to Chapters II-1 and V of the International Convention for the Safety of Life at Sea, 1974, as amended

CHAPTER II-1

CONSTRUCTION – SUBDIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS

PART B

SUBDIVISION AND STABILITY

1. The following new regulation 8-3 is added after existing regulation 8-2:

„Regulation 8-3

Special requirements for passenger ships, other than ro-ro passenger ships, carrying 400 persons or more

Notwithstanding the provisions of regulation 8, passenger ships, other than ro-ro passenger ships, certified to carry 400 persons or more constructed on or after 1 July 2002 shall comply with the provisions of paragraphs 2.3 and 2.4 of regulation 8, assuming the damage applied anywhere within the ship's length L”.

CHAPTER V

SAFETY OF NAVIGATION

2 The following new regulation 8-2 is added after existing regulation 8-1:

„Regulation 8-2

Vessel traffic services

1 Vessel traffic services (VTS) contribute to the safety of life at sea, safety and efficiency of navigation and the protection of the marine environment, adjacent shore areas, work sites and offshore installations from possible adverse effects of maritime traffic.

2 Contracting Governments undertake to arrange for the establishment of VTS where, in their opinion, the volume of traffic or the degree of risk justifies such services.

3 Contracting Governments planning and implementing VTS shall, wherever possible, follow the guidelines developed by the Organization*. The use of a VTS may only be made mandatory in sea areas within the territorial seas of a coastal State.

4 Contracting Governments shall endeavour to secure participation in, and compliance with the provisions of, VTSs by ships entitled to fly their flags.

5 Nothing in this regulation or the guidelines adopted by the Organization shall prejudice the rights and duties of Governments under international law or the legal regimes of straits used for international navigation and archipelagic sea lanes.”

Resolutie 1 van 27 november 1997

De Conferentie van de Verdragsluitende Regeringen die Partij zijn bij het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, heeft op 27 november 1997 in overeenstemming met artikel VIII-(c)(ii) van het Verdrag wijzigingen aangenomen bij resolutie 1 van die Conferentie.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

* Refer to the Guidelines on Vessel Traffic Services, adopted by the Organization by resolutiion A.857(20)

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 januari 1999 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 juli 1999 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

Resolution 1 of the Conference of Contracting Governments to the International Convention for the Safety of Life at Sea, 1974 adopted on 27 november 1997

Adoption of amendments to the annex to the International Convention for the Safety of Life at Sea, 1974

The Conference,

Recalling article VIII(c) of the International Convention for the Safety of Life at Sea, 1974 (hereinafter referred to as „the Convention”), concerning the procedure for amending the Convention by a Conference of Contracting Governments,

Noting resolutions A.713(17) and A.797(19) adopted by the Assembly of the International Maritime Organization (IMO), concerning the safety of ships carrying solid bulk cargoes,

Being deeply concerned at the continued loss of ships carrying bulk cargoes, sometimes without a trace, and the heavy loss of life incurred,

Recognizing the urgent need to further improve the safety standards of ships carrying solid bulk cargoes, in all aspects of their design, equipment and operation to avoid recurrence of such casualties,

Having considered amendments to the Annex to the Convention proposed and circulated to all Members of IMO and all Contracting Governments to the Convention,

1. Adopts, in accordance with article VIII(c)(ii) of the Convention, amendments to the Annex to the Convention the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 January 1999, unless, prior to that date, more than one third of Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of the world's merchant fleet, have notified the Secretary-General of IMO of their objections to the amendments;

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

3. Invites Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 1999 upon their acceptance in accordance with paragraph 2 above.

Annex

Amendments to the annex to the International convention for the Safety of Life at sea, 1974

The following new chapter XII is added after existing chapter XI:

„CHAPTER XII

ADDITIONAL SAFETY MEASURES FOR BULK CARRIERS

Regulation 1

Definitions

For the purpose of this chapter:

- 1 „Bulk carrier” means a bulk carrier as defined in regulation IX/1.6.
- 2 „Bulk carrier of single side skin construction” means a bulk carrier in which a cargo hold is bounded by the side shell.
- 3 „Length” of a bulk carrier means the length as defined in the International Convention on Load Lines in force.
- 4 „Solid bulk cargo” means any material, other than liquid or gas, consisting of a combination of particles, granules or any larger pieces of material, generally uniform in composition, which is loaded directly into the cargo spaces of a ship without any intermediate form of containment.
- 5 „Bulk carrier bulkhead and double bottom strength standards” means „Standards for the evaluation of scantlings of the transverse watertight vertically corrugated bulkhead between the two foremost cargo holds and for the evaluation of allowable hold loading of the foremost cargo hold” adopted by resolution 4 of the Conference of Contracting Governments to the International Convention for the Safety of Life at Sea, 1974 on 27 November 1997, as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I.
- 6 The term „ships constructed” has the same meaning as defined in regulation II-1/I .1.3.1.

Regulation 2

Application

Bulk carriers shall comply with the requirements of this chapter in addition to the applicable requirements of other chapters.

Regulation 3

Implementation schedule

(This regulation applies to bulk carriers constructed before 1 July 1999)

Bulk carriers to which regulations 4 or 6 apply shall comply with the provisions of such regulations according to the following schedule, with reference to the enhanced programme of inspections required by regulation XI/2:

- .1 bulk carriers which are 20 years of age and over on 1 July 1999, by the date of the first intermediate survey or the first periodical survey after 1 July 1999, whichever comes first;
- .2 bulk carriers which are 15 years of age and over but less than 20 years of age on 1 July 1999, by the date of the first periodical survey after 1 July 1999, but not later than 1 July 2002; and
- .3. bulk carriers which are less than 15 years of age on 1 July 1999, by the date of the first periodical survey after the date on which the ship reaches 15 years of age, but not later than the date on which the ship reaches 17 years of age.

Regulation 4

Damage stability requirements applicable to bulk carriers

1 Bulk carriers of 150 m in length and upwards of single side skin construction, designed to carry solid bulk cargoes having a density of 1000 kg/m³ and above, constructed on or after 1 July 1999 shall, when loaded to the summer load line, be able to withstand flooding of any one cargo hold in all loading conditions and remain afloat in a satisfactory condition of equilibrium, as specified in paragraph 3.

2 Bulk carriers of 150 m in length and upwards of single side skin construction, carrying solid bulk cargoes having a density of 1780 kg/m³ and above, constructed before 1 July 1999 shall, when loaded to the summer load line, be able to withstand flooding of the foremost cargo hold in all loading conditions and remain afloat in a satisfactory condition of equilibrium, as specified in paragraph 3. This requirement shall be complied with in accordance with the implementation schedule specified in regulation 3.

3 Subject to the provisions of paragraph 6, the condition of equilibrium after flooding shall satisfy the condition of equilibrium laid down

in the annex to resolution A.320(IX) – Regulation equivalent to regulation 27 of the International Convention on Load Lines, 1966, as amended by resolution A.514(13). The assumed flooding need only take into account flooding of the cargo hold space. The permeability of a loaded hold shall be assumed as 0.9 and the permeability of an empty hold shall be assumed as 0.95, unless a permeability relevant to a particular cargo is assumed for the volume of a flooded hold occupied by cargo and a permeability of 0.95 is assumed for the remaining empty volume of the hold.

4 Bulk carriers constructed before 1 July 1999 which have been assigned a reduced freeboard in compliance with regulation 27(7) of the International Convention on Load Lines, 1966, as adopted on 5 April 1966, may be considered as complying with paragraph 2.

5 Bulk carriers which have been assigned a reduced freeboard in compliance with the provisions of paragraph (8) of the regulation equivalent to regulation 27 of the International Convention on Load Lines, 1966, adopted by resolution A.320(IX), as amended by resolution A.514(13), may be considered as complying with paragraphs 1 or 2, as appropriate.

6 On bulk carriers which have been assigned reduced freeboard in compliance with the provisions of regulation 27(8) set out in Annex B of the Protocol of 1988 relating to the International Convention on Load Lines, 1966, the condition of equilibrium after flooding shall satisfy the relevant provisions of that Protocol.

Regulation 5

Structural strength of bulk carriers

(This regulation applies to bulk carriers constructed on or after 1 July 1999)

Bulk carriers of 150 m in length and upwards of single side skin construction, designed to carry solid bulk cargoes having a density of 1000 kg/m³ and above, shall have sufficient strength to withstand flooding of any one cargo hold in all loading and ballast conditions, taking also into account dynamic effects resulting from the presence of water in the hold, and taking into account the recommendations adopted by the Organization*.

Regulation 6

Structural and other requirements for bulk carriers

(This regulation applies to bulk carriers constructed before 1 July 1999)

* Refer to resolution 3 on Recommendation on compliance with SOLAS regulation XII/5, adopted by the 1997 SOLAS Conference.

1 Bulk carriers of 150 m in length and upwards of single side skin construction, carrying solid bulk cargoes having a density of 1780 kg/m³ and above, shall comply with the requirements of this regulation in accordance with the implementation schedule specified in regulation 3.

2 The transverse watertight bulkhead between the two foremost cargo holds and the double bottom of the foremost cargo hold shall have sufficient strength to withstand flooding of the foremost cargo hold, taking also into account dynamic effects resulting from the presence of water in the hold, in compliance with the Bulk carrier bulkhead and double bottom strength standards. For the purpose of this regulation, the Bulk carrier bulkhead and double bottom strength standards shall be treated as mandatory.

3 In considering the need for, and the extent of, strengthening of the transverse watertight bulkhead or double bottom to meet the requirements of paragraph 2, the following restrictions may be taken into account:

- .1 restrictions on the distribution of the total cargo weight between the cargo holds; and
- .2 restrictions on the maximum deadweight.

4 For bulk carriers using either of, or both, the restrictions given in paragraphs 3.1 and 3.2 above for the purpose of fulfilling the requirements of paragraph 2, these restrictions shall be complied with whenever solid bulk cargoes having a density of 1780 kg/m³ and above are carried.

Regulation 7

Survey of the cargo hold structure of bulk carriers

(This regulation applies to bulk carriers constructed before 1 July 1999)

Bulk carriers of 150 m in length and upwards of single side skin construction, of 10 years of age and over, shall not carry solid bulk cargoes having a density of 1780 kg/m³ and above unless it has satisfactorily undergone either:

- .1 a periodical survey in accordance with the enhanced programme of inspections required by regulation XI/2; or
- .2 a survey of all cargo holds to the same extent as required for periodical surveys in the enhanced survey programme of inspections required by regulation XI/2.

Regulation 8

Information on compliance with requirements for bulk carriers

1 The booklet required by regulation VI/7.2 shall be endorsed by the Administration, or on its behalf, to indicate that regulations 4, 5, 6 and 7, as appropriate, are complied with.

2 Any restrictions imposed on the carriage of solid bulk cargoes having a density of 1780 kg/m³ and above in accordance with the requirements of regulation 6 shall be identified and recorded in the booklet referred to in paragraph 1.

3 Bulk carriers to which paragraph 2 applies shall be permanently marked on the side shell at amidships, port and starboard, with a solid equilateral triangle having sides of 500 mm and its apex 300 mm below the deck line, and painted a contrasting colour to that of the hull.

Regulation 9

Requirements for bulk carriers not being capable of complying with regulation 4.2 due to the design configuration of their cargo holds

(This regulation applies to bulk carriers constructed before 1 July 1999)

For bulk carriers being within the application limits of regulation 4.2, which have been constructed with an insufficient number of transverse watertight bulkheads to satisfy that regulation, the Administration may allow relaxation from the application of regulations 4.2 and 6 on condition that they shall comply with the following requirements:

- .1 for the foremost cargo hold, the inspections prescribed for the annual survey in the enhanced programme of inspections required by regulation XI/2 shall be replaced by the inspections prescribed therein for the intermediate survey of cargo holds;
- .2 are provided with bilge well high water level alarms in all cargo holds, or in cargo conveyor tunnels, as appropriate, giving an audible and visual alarm on the navigation bridge, as approved by the Administration or an organization recognized by it in accordance with the provisions of regulation XI/1; and
- 3 are provided with detailed information on specific cargo hold flooding scenarios. This information shall be accompanied by detailed instructions on evacuation preparedness under the provisions of Section 8 of the International Safety Management (ISM) Code and be used as the basis for crew training and drills.

Regulation 10

Solid bulk cargo density declaration

1 Prior to loading bulk cargo on a bulk carrier, the shipper shall declare the density of the cargo, in addition to providing the cargo information required by regulation VI/2.

2 For bulk carriers to which regulation 6 applies, unless such bulk carriers comply with all the relevant requirements of this chapter applicable to the carriage of solid bulk cargoes having a density of 1780 kg/m³ and above, any cargo declared to have a density within the range 1250 kg/m³ to 1780 kg/m³ shall have its density verified by an accredited testing organization.

Regulation 11

Loading instrument

(This regulation applies to bulk carriers regardless of their date of construction)

1 Bulk carriers of 150 m in length and upwards shall be fitted with a loading instrument capable of providing information on hull girder shear forces and bending moments, taking into account the recommendation adopted by the Organization*.

2 Bulk carriers of 150 m in length and upwards constructed before 1 July 1999 shall comply with the requirements of paragraph 1 not later than the date of the first intermediate or periodical survey of the ship to be carried out after 1 July 1999.”

Resolutie MSC.69(69) van 18 mei 1998

Bij Resolutie MSC.69(69) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 18 mei 1998 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 januari 2002 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 juli 2002 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

* Refer to resolution 5 on Recommendation on loading instruments, adopted by the 1997 SOLAS Conference.

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

Resolution MSC.69(69)
(adopted on 18 May 1998)

**Adoption of Amendments to the International Convention for the
Safety of Life at Sea, 1974, as amended**

The maritime safety committee,

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as “the Convention”, concerning the procedures for amending the Annex to the Convention other than chapter I,

Having considered, at its sixty-ninth session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 January 2002, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;

3. Invites Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2002 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex**Amendments to the international convention for the Safety of Life at Sea, 1974, as amended**

CHAPTER II-1

CONSTRUCTION – SUBDIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS

PART B

SUBDIVISION AND STABILITY

Regulation 14

Construction and initial testing of watertight bulkheads, etc., in passenger ships and cargo ships

- 1 The existing text of paragraph 3 is replaced by the following:
„3 Testing main compartments by filling them with water is not compulsory. When testing by filling with water is not carried out, a hose test shall be carried out where practicable. This test shall be carried out in the most advanced stage of the fitting out of the ship. Where a hose test is not practicable because of possible damage to machinery, electrical equipment insulation or outfitting items, it may be replaced by a careful visual examination of welded connections, supported where deemed necessary by means such as a dye penetrant test or an ultrasonic leak test or an equivalent test. In any case a thorough inspection of the watertight bulkheads shall be carried out.”

CHAPTER IV

RADIOCOMMUNICATIONS

Regulation 1

Application

- 2 In paragraph 1, the words “Unless expressly provided otherwise,” are inserted before the words “this chapter”.

Regulation 2

Terms and definitions

- 3 The following new subparagraph .16 of paragraph 1 is added after existing subparagraph .15:

“.16 Global Maritime Distress and Safety System (GMDSS) identities means maritime mobile services identity, the ship's call sign, Inmarsat identities and serial number identity which may be transmitted by the ship's equipment and used to identify the ship.”

- 4 The existing text of paragraph 2 is replaced by the following:
 „2. All other terms and abbreviations which are used in this chapter and which are defined in the Radio regulations and in the International Convention on Maritime Search and Rescue (SAR), 1979, as may be amended, shall have the meanings as defined in those regulations and the SAR Convention.”
 5. The following new regulation 5-1 is added after existing regulation 5:

Regulation 5-1

Global Maritime Distress and Safety System identities

- 1 This Regulation applies to all ships on all voyages.
 2 Each Contracting Government undertakes to ensure that suitable arrangements are made for registering Global Maritime Distress and Safety System (GMDSS) identities and for making information on these identities available to rescue co-ordination centres on a 24-hour basis. Where appropriate, international organizations maintaining a registry of these identities shall be notified by the Contracting Government of these assignments.”

Regulation 13

Source of energy

- 6 In paragraph 8, the words “, including the navigation receiver referred to in regulation 18,” are inserted after the word “chapter”.

Regulation 15

Maintenance requirements

- 7 The following new paragraph 9 is added after existing paragraph 8:
 “9. Satellite EPIRBs shall be tested at intervals not exceeding 12 months for all aspects of operational efficiency with particular emphasis on frequency stability, signal strength and coding. However, in cases where it appears proper and reasonable, the Administration may extend this period to 17 months. The test may be conducted on board the ship or at an approved testing or servicing station.”

8 The following new Regulation 18 is added after existing regulation 17:

Regulation 18

Position-updating

All two-way communication equipment carried on board a ship to which this chapter applies which is capable of automatically including the ship's position in the distress alert shall be automatically provided with this information from an internal or external navigation receiver, if either is installed. If such a receiver is not installed, the ship's position and the time at which the position was determined shall be manually updated at intervals not exceeding four hours, while the ship is underway, so that it is always ready for transmission by the equipment.”*

CHAPTER VI

CARRIAGE OF CARGOES

Regulation 5

Stowage and securing

9 The existing text of paragraph 6 is replaced by the following:
“6 All cargoes, other than solid and liquid bulk cargoes, shall be loaded, stowed and secured throughout the voyage in accordance with the Cargo Securing Manual approved by the Administration. In ships with ro-ro cargo spaces, as defined in regulation II-2/3.14, all securing of such cargoes, in accordance with the Cargo Securing Manual, shall be completed before the ship leaves berth. The Cargo Securing Manual shall be drawn up to a standard at least equivalent to relevant guidelines developed by the Organization”.*

CHAPTER VII

CARRIAGE OF DANGEROUS GOODS

Regulation 5

Documents

10 The existing text of paragraph 6 is deleted.

* Refer to the Guidelines on the preparation of the Cargo Securing Manual, approved by the Maritime Safety Committee of the Organization and promulgated by circular MSC/Cir. 745.

Regulation 6

Stowage requirements

- 11 The title of this regulation is replaced by “Stowage and securing”.
- 12 The following new paragraph 6 is added after existing paragraph 5:

„6. All cargoes, other than solid and liquid bulk cargoes, shall be loaded, stowed and secured throughout the voyage in accordance with the Cargo Securing Manual approved by the Administration. In ships with ro-ro cargo spaces, as defined in regulation II-2/3.14, all securing of such cargoes, in accordance with the Cargo Securing Manual, shall be completed before the ship leaves berth. The Cargo Securing Manual shall be drawn up to a standard at least equivalent to relevant guidelines developed by the Organization”.

Resolutie MSC.87(71) van 27 mei 1999

Bij Resolutie MSC.87(71) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 27 mei 1999 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 juli 2000 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 januari 2001 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

**Resolution MSC.87(71)
(adopted on 27 May 1999)**

**Adoption of Amendments to the International Convention for the
Safety of Life at Sea, 1974, as amended**

The maritime safety committee,

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as “the Convention”, concerning the procedures for amending the Annex to the Convention, other than the provisions of chapter I thereof,

Recognizing the need for the mandatory application of an agreed international standard for the carriage of INF cargo by sea,

Having considered, at its seventy-first session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2000, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;

3. Invites Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2001 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex

Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

CHAPTER VII

CARRIAGE OF DANGEROUS GOODS

PART A

1 The following sentence is added at the end of existing paragraph 3 of regulation 1:

“In addition, the requirements of part D shall apply to the carriage

of INF cargo as defined in regulation 14.2”.

2 The following new part D is added after existing part C:

“PART D

SPECIAL REQUIREMENTS FOR THE CARRIAGE OF PACKAGED IRRADIATED
NUCLEAR FUEL, PLUTONIUM AND HIGH-LEVEL RADIOACTIVE WASTES ON
BOARD SHIPS

Regulation 14

Definitions

For the purpose of this part, unless expressly provided otherwise:

1 INF Code means the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships, adopted by the Maritime Safety Committee of the Organization by resolution MSC.88(71), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter 1.

2 INF cargo means packaged irradiated nuclear fuel, plutonium and high-level radioactive wastes carried as cargo in accordance with Class 7 of the IMDG Code, schedule 10, 11, 12 or 13.

3 Irradiated nuclear fuel means material containing uranium, thorium and/or plutonium isotopes which has been used to maintain a self-sustaining nuclear chain reaction.

4 Plutonium means the resultant mixture of isotopes of that material extracted from irradiated nuclear fuel from reprocessing.

5 High-level radioactive wastes means liquid wastes resulting from the operation of the first stage extraction system or the concentrated wastes from subsequent extraction stages, in a facility for reprocessing irradiated nuclear fuel, or solids into which such liquid wastes have been converted.

6 IMDG Code means the International Maritime Dangerous Goods Code adopted by the Assembly of the Organization by resolution A.716(17), as amended and may be amended by the Maritime Safety Committee.

Regulation 15

Application to ships carrying INF cargo

1 Except as provided for in paragraph 2, this part shall apply to all ships regardless of the date of construction and size, including cargo ships of less than 500 gross tonnage, engaged in the carriage of INF cargo.

2 This part and the INF Code do not apply to warships, naval auxiliary or other vessels owned or operated by a Contracting Government and used, for the time being, only on government non-commercial service; however, each Administration shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such ships owned or operated by it, that such ships carrying INF cargo act in a manner consistent, so far as reasonable and practicable, with this part and the INF Code.

3 Nothing in this part or the INF Code shall prejudice the rights and duties of governments under international law and any action taken to enforce compliance shall be consistent with international law.

Regulation 16

Requirements for ships carrying INF cargo

1 A ship carrying INF cargo shall comply with the requirements of the INF Code in addition to any other applicable requirements of the present regulations and shall be surveyed and certified as provided for in that Code.

2 A ship holding a certificate issued pursuant to the provisions of paragraph 1 shall be subject to the control established in regulations I/19 and XI/4. For this purpose, such certificate shall be treated as a certificate issued under regulation I/12 or I/13.”

Resolutie MSC.91(72) van 26 mei 2000

Bij Resolutie MSC.91(72) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 26 mei 2000 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 juli 2001 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 januari 2002 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

Resolution MSC.91(72)
(adopted on 26 May 2000)

**Adoption of Amendments to the International Convention for the
Safety of Life at Sea, 1974, as amended**

The maritime safety committee,

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as "the Convention", concerning the procedures for amending the Annex to the Convention, other than the provisions of chapter I thereof,

Noting its decision, at its seventieth session, that the requirement of SOLAS regulation III/28.2 (that passenger ships of 130 m in length and upwards constructed on or after 1 July 1999 should be fitted with a helicopter landing area) should be repealed for non ro-ro passenger ships, and the subsequent issuance to this effect of MSC/Circ.907 on Application of SOLAS regulation III/28.2 concerning helicopter landing areas on non ro-ro passenger ships,

Noting further the addition to the 1974 SOLAS Convention of a new SOLAS chapter XII (Additional safety measures for bulk carriers) adopted by resolution 1 of the 1997 SOLAS Conference,

Having considered, at its seventy-second session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2001, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. Invites Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2002, upon their acceptance in accordance with paragraph 2 above;

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting States to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex

**Amendments to the International Convention for
the Safety of Life at Sea, 1974, as amended**

CHAPTER III

LIFE-SAVING APPLIANCES AND ARRANGEMENTS

Regulation 28

Helicopter landing and pick-up areas

1. In paragraph 2 of the regulation, the words “Passenger ships” are replaced by the words “Ro-ro passenger ships”.

Appendix

Certificates

2. In the form of the Cargo Ship Safety Construction Certificate and the Cargo Ship Safety Equipment Certificate given in the appendix to the Annex to the International Convention for the Safety of Life at Sea, 1974, under the heading “Type of ship”, the words “Bulk carrier” are inserted between the heading and the words “Oil tanker”.

Resolutie MSC .99(73) van 5 december 2000

Bij Resolutie MSC.99(73) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 5 december 2000 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 januari 2002 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 juli 2002 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

Resolution MSC.99(73)

(adopted on 5 December 2000)

Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

The maritime safety committee,

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as “the Convention”, concerning the procedures for amending the Annex to the Convention, other than the provisions of chapter I thereof,

Having considered, at its seventy-third session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 January 2002, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. Invites Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2002 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

5. further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex

Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

CHAPTER II-1

CONSTRUCTION – STRUCTURE, SUBDIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS

Regulation 3-4

Emergency towing arrangements on tankers

1 The existing text of the regulation is replaced by the following:

“Regulation 3-4

Emergency towing arrangements on tankers

- 1 Emergency towing arrangements shall be fitted at both ends on board every tanker of not less than 20,000 tonnes deadweight.
 - 2 For tankers constructed on or after 1 July 2002:
 - .1 the arrangements shall, at all times, be capable of rapid deployment in the absence of main power on the ship to be towed and easy connection to the towing ship. At least one of the emergency towing arrangements shall be pre-rigged ready for rapid deployment; and
 - .2 emergency towing arrangements at both ends shall be of adequate strength taking into account the size and deadweight of the ship, and the expected forces during bad weather conditions. The design and construction and prototype testing of emergency towing arrangements shall be approved by the Administration, based on the Guidelines developed by the Organization.
 - 3 For tankers constructed before 1 July 2002, the design and construction of emergency towing arrangements shall be approved by the Administration, based on the Guidelines developed by the Organization.*
- 2 The following new regulation 3-5 is inserted after existing regulation 3-4:

* Refer to the Guidelines on emergency towing arrangements for tankers adop-

“Regulation 3-5

New installation of materials containing asbestos

- 1 This regulation shall apply to materials used for the structure, machinery, electrical installations and equipment covered by the present Convention.
- 2 For all ships, new installation of materials which contain asbestos shall be prohibited except for:
 - .1 vanes used in rotary vane compressors and rotary vane vacuum pumps;
 - .2 watertight joints and linings used for the circulation of fluids when, at high temperature (in excess of 350°C) or pressure (in excess of 7×10^6 Pa), there is a risk of fire, corrosion or toxicity; and
 - .3 supple and flexible thermal insulation assemblies used for temperatures above 1,000°C.”

Regulation 43

Emergency source of electrical power in cargo ships

- 3 In paragraph 2.2.5, the word “and” is deleted.
- 4 In paragraph 2.2.6, the word “motors.” is replaced by the words “motors; and”.
- 5 In paragraph 2.2, the following new subparagraph .7 is added after existing subparagraph .6:

“.7 in all cargo pump-rooms of tankers constructed on or after 1 July 2002”.

CHAPTER II-2

CONSTRUCTION – FIRE PROTECTION, FIRE DETECTION AND FIRE EXTINCTION

- 6 THE EXISTING TEXT OF CHAPTER II-2 IS REPLACED BY THE FOLLOWING:

“PART A – GENERAL

Regulation 1

Application

1 Application

- 1.1 Unless expressly provided otherwise, this chapter shall apply to

ted by the Maritime Safety Committee by resolution MSC.35(63), as may be amended.”

ships constructed on or after 1 July 2002.

1.2 For the purpose of this chapter:

- .1 the expression *ships constructed* means ships the keels of which are laid or which are at a similar stage of construction;
- .2 the expression *all ships* means ships, irrespective of type, constructed before, on or after 1 July 2002; and
- .3 a cargo ship, whenever built, which is converted to a passenger ship shall be treated as a passenger ship constructed on the date on which such a conversion commences.

1.3 For the purpose of this chapter, the expression *a similar stage of construction* means the stage at which:

- .1 construction identifiable with a specific ship begins; and
- .2 assembly of that ship has commenced comprising at least 50 tonnes or one per cent of the estimated mass of all structural material, whichever is less.

2. Applicable requirements to existing ships

2.1 Unless expressly provided otherwise, for ships constructed before 1 July 2002 the Administration shall ensure that the requirements which are applicable under chapter II-2 of the International Convention for the Safety of Life at Sea, 1974, as amended by resolutions MSC.1(XLV), MSC.6(48), MSC.13(57), MSC.22(59), MSC.24(60), MSC.27(61), MSC.31(63) and MSC.57(67), are complied with.

2.2 Ships constructed before 1 July 2002 shall also comply with:

- .1 paragraphs 3, 6.5 and 6.7 as appropriate;
- .2 regulations 13.3.4.2 to 13.3.4.5, 13.4.3 and Part E, except regulations 16.3.2.2 and 16.3.2.3 thereof, as appropriate, not later than the date of the first survey after 1 July 2002;
- .3 regulations 10.4.1.3 and 10.6.4 for new installations only; and
- .4 regulation 10.5.6 not later than 1 October 2005 for passenger ships of 2,000 gross tonnage and above.

3 Repairs, alterations, modifications and outfitting

3.1 All ships which undergo repairs, alterations, modifications and outfitting related thereto shall continue to comply with at least the requirements previously applicable to these ships. Such ships, if constructed before 1 July 2002, shall, as a rule, comply with the requirements for ships constructed on or after that date to at least the same extent as they did before undergoing such repairs, alterations, modifications or outfitting.

3.2 Repairs, alterations and modifications which substantially alter the dimensions of a ship or the passenger accommodation spaces, or substantially increase a ship's service life and outfitting related thereto shall meet the requirements for ships constructed on or after 1 July 2002 in so far as the Administration deems reasonable and practicable.

4 Exemptions

4.1 The Administration may, if it considers that the sheltered nature and conditions of the voyage are such as to render the application of any specific requirements of this chapter unreasonable or unnecessary, exempt * from those requirements individual ships or classes of ships entitled to fly the flag of its State, provided that such ships, which, in the course of their voyage, do not sail at distances of more than 20 miles from the nearest land.

4.2 In the case of passenger ships which are employed in special trades for the carriage of large numbers of special trade passengers, such as the pilgrim trade, the Administration, if satisfied that it is impracticable to enforce compliance with the requirements of this chapter, may exempt such ships from those requirements, provided that they comply fully with the provisions of:

- .1 the rules annexed to the Special Trade Passenger Ships Agreement, 1971; and
- .2 the rules annexed to the Protocol on Space Requirements for Special Trade Passenger Ships, 1973.

5 Applicable requirements depending on ship type

Unless expressly provided otherwise:

- .1 requirements not referring to a specific ship type shall apply to ships of all types; and
- .2 requirements referring to "tankers" shall apply to tankers subject to the requirements specified in paragraph 6 below.

6 Application of requirements for tankers

6.1 Requirements for tankers in this chapter shall apply to tankers carrying crude oil or petroleum products having a flashpoint not exceeding 60°C (closed cup test), as determined by an approved flashpoint apparatus, and a Reid vapour pressure which is below the atmospheric pressure or other liquid products having a similar fire hazard.

6.2 Where liquid cargoes other than those referred to in paragraph 6.1 or liquefied gases which introduce additional fire hazards are intended to be carried, additional safety measures shall be required, having due regard to the provisions of the International Bulk Chemical Code, as defined in regulation VII/8.1, the Bulk Chemical Code, the International Gas Carrier Code, as defined in regulation VII/11.1, and the Gas Carrier Code, as appropriate.

6.2.1 A liquid cargo with a flashpoint of less than 60°C for which a regular foam firefighting system complying with the Fire Safety Systems Code is not effective, is considered to be a cargo introducing additional fire hazards in this context. The following additional measures are required:

- .1 the foam shall be of alcohol resistant type;
- .2 the type of foam concentrates for use in chemical tankers shall

* Refer to port State concurrence with SOLAS exemptions (MSC/Circ.606).

be to the satisfaction of the Administration taking into account the guidelines developed by the Organization,* and

- .3 the capacity and application rates of the foam extinguishing system shall comply with chapter 11 of the International Bulk Chemical Code, except that lower application rates may be accepted based on performance tests. For tankers fitted with inert gas systems, a quantity of foam concentrate sufficient for 20 min of foam generation may be accepted.**

6.2.2 For the purpose of this regulation, a liquid cargo with a vapour pressure greater than 1.013 bar absolute at 37.8°C is considered to be a cargo introducing additional fire hazards. Ships carrying such substances shall comply with paragraph 15.14 of the International Bulk Chemical Code. When ships operate in restricted areas and at restricted times, the Administration concerned may agree to waive the requirements for refrigeration systems in accordance with paragraph 15.14.3 of the International Bulk Chemical Code.

6.3 Liquid cargoes with a flashpoint exceeding 60°C other than oil products or liquid cargoes subject to the requirements of the International Bulk Chemical Code are considered to constitute a low fire risk, not requiring the protection of a fixed foam extinguishing system.

6.4 Tankers carrying petroleum products with a flashpoint exceeding 60°C (closed cup test), as determined by an approved flashpoint apparatus, shall comply with the requirements provided in regulations 10.2.1.4.4. and 10.10.2.3 and the requirements for cargo ships other than tankers, except that, in lieu of the fixed fire extinguishing system required in regulation 10.7, they shall be fitted with a fixed deck foam system which shall comply with the provisions of the Fire Safety Systems Code.

6.5 Combination carriers constructed before, on or after 1 July 2002 shall not carry cargoes other than oil unless all cargo spaces are empty of oil and gas-freed or unless the arrangements provided in each case have been approved by the Administration taking into account the guidelines developed by the Organization.***

6.6 Chemical tankers and gas carriers shall comply with the requirements for tankers, except where alternative and supplementary arrangements are provided to the satisfaction of the Administration, having due regard to the provisions of the International Bulk Chemical Code and the International Gas Carrier Code, as appropriate.

* Refer to the Guidelines for performance and testing criteria and surveys of expansion foam concentrates for fire-extinguishing systems for chemical tankers (MSC/Circ.799).

** Refer to the Information on flashpoint and recommended fire-fighting media for chemicals to which neither the IBC nor BCH Codes apply (MSC/Circ.553).

*** Refer to the Guidelines for inert gas systems (MSC/Circ.353), as amended by MSC/Circ.387.

6.7 The requirements of regulations 4.5.10.1.1 and 4.5.10.1.4, and a system for continuous monitoring of the concentration of hydrocarbon gases shall be fitted on all tankers constructed before 1 July 2002 by the date of the first scheduled dry-docking after 1 July 2002, but not later than 1 July 2005. Sampling points or detector heads shall be located in suitable positions in order that potentially dangerous leakages are readily detected. When the hydrocarbon gas concentration reaches a pre-set level which shall not be higher than 10% of the lower flammable limit, a continuous audible and visual alarm signal shall be automatically effected in the pump-room and cargo control room to alert personnel to the potential hazard. However, existing monitoring systems already fitted having a pre-set level not greater than 30% of the lower flammable limit may be accepted.

Regulation 2

Fire safety objectives and functional requirements

1 Fire safety objectives

1.1 The fire safety objectives of this chapter are to:

- .1 prevent the occurrence of fire and explosion;
- .2 reduce the risk to life caused by fire;
- .3 reduce the risk of damage caused by fire to the ship, its cargo and the environment;
- .4 contain, control and suppress fire and explosion in the compartment of origin; and
- .5 provide adequate and readily accessible means of escape for passengers and crew.

2. Functional requirements

2.1 In order to achieve the fire safety objectives set out in paragraph 1, the following functional requirements are embodied in the regulations of this chapter as appropriate:

- .1 division of the ship into main vertical and horizontal zones by thermal and structural boundaries;
- .2 separation of accommodation spaces from the remainder of the ship by thermal and structural boundaries;
- .3 restricted use of combustible materials;
- .4 detection of any fire in the zone of origin;
- .5 containment and extinction of any fire in the space of origin;
- .6 protection of means of escape and access for fire-fighting;
- .7 ready availability of fire-extinguishing appliances; and
- .8 minimization of possibility of ignition of flammable cargo vapour.

3 Achievement of the fire safety objectives

The fire safety objectives set out in paragraph 1 above shall be achieved by ensuring compliance with the prescriptive requirements specified in parts B, C, D, E or G, or by alternative design and arrangements

which comply with Part F. A ship shall be considered to meet the functional requirements set out in paragraph 2 and to achieve the fire safety objectives set out in paragraph 1 when either:

- .1 the ship's designs and arrangements, as a whole, comply with the relevant prescriptive requirements in parts B, C, D, E or G;
- .2 the ship's designs and arrangements, as a whole, have been reviewed and approved in accordance with part F; or
- .3 part(s) of the ship's designs and arrangements have been reviewed and approved in accordance with part F and the remaining parts of the ship comply with the relevant prescriptive requirements in parts B, C, D, E or G.

Regulation 3

Definitions

For the purpose of this chapter, unless expressly provided otherwise, the following definitions shall apply:

1 Accommodation spaces are those spaces used for public spaces, corridors, lavatories, cabins, offices, hospitals, cinemas, game and hobby rooms, barber shops, pantries containing no cooking appliances and similar spaces;

2. "A" class divisions are those divisions formed by bulkheads and decks which comply with the following criteria:

- .1 they are constructed of steel or other equivalent material;
- .2 they are suitably stiffened;
- .3 they are insulated with approved non-combustible materials such that the average temperature of the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature, at any one point, including any joint, rise more than 180°C above the original temperature, within the time listed below:

class "A-60"	60 min
class "A-30"	30 min
class "A-15"	15 min
class "A-0"	0 min
- .4 they are constructed as to be capable of preventing the passage of smoke and flame to the end of the one-hour standard fire test; and
- .5 the Administration required a test of a prototype bulkhead or deck in accordance with the Fire Test Procedures Code to ensure that it meets the above requirements for integrity and temperature rise.

3 Atriums are public spaces within a single main vertical zone spanning three or more open decks.

4 "B" class divisions are those divisions formed by bulkheads, decks, ceilings or linings which comply with the following criteria:

- .1 they are constructed of approved non-combustible materials and all materials used in the construction and erection of "B" class divisions are non-combustible, with the exception that combustible veneers may be permitted provided they meet other appropriate requirements of this chapter;
 - .2 they have an insulation value such that the average temperature of the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature at any one point, including any joint, rise more than 225°C above the original temperature, within the time listed below:

class "B-15"	15 min
class "B-0"	0 min
 - .3 they are constructed as to be capable of preventing the passage of flame to the end of the first half hour of the standard fire test; and
 - .4 the Administration has required a test of a prototype division in accordance with the Fire Test Procedures Code to ensure that it meets the above requirements for integrity and temperature rise.
- 5 Bulkhead deck is the uppermost deck up to which the transverse watertight bulkheads are carried.
- 6 Cargo area is that part of the ship that contains cargo holds, cargo tanks, slop tanks and cargo pump-rooms including pump-rooms, cofferdams, ballast and void spaces adjacent to cargo tanks and also deck areas throughout the entire length and breadth of the part of the ship over the afore-mentioned spaces.
- 7 Cargo ship is a ship as defined in regulation I/2(g).
- 8 Cargo spaces are spaces used for cargo, cargo oil tanks, tanks for other liquid cargo and trunks to such spaces.
- 9 Central control station is a control station in which the following control and indicator functions are centralized:
- .1 fixed fire detection and fire alarm systems;
 - .2 automatic sprinkler, fire detection and fire alarm systems;
 - .3 fire door indicator panels;
 - .4 fire door closure;
 - .5 watertight door indicator panels;
 - .6 watertight door closures;
 - .7 ventilation fans;
 - .8 general/fire alarms;
 - .9 communication systems including telephones; and
 - .10 microphones to public address systems.
- 10 "C" class divisions are divisions constructed of approved non-combustible materials. They need meet neither requirements relative to the passage of smoke and flame nor limitations relative to the temperature rise. Combustible veneers are permitted provided they meet the requirements of this chapter.

11 Chemical tanker is a cargo ship constructed or adapted and used for the carriage in bulk of any liquid product of a flammable nature listed in chapter 17 of the International Bulk Chemical Code, as defined in regulation VII/8.1.

12 Closed ro-ro spaces are ro-ro spaces which are neither open ro-ro spaces nor weather decks.

13 Closed vehicle spaces are vehicle spaces which are neither open vehicle spaces nor weather decks.

14 Combination carrier is a cargo ship designed to carry both oil and solid cargoes in bulk.

15 Combustible material is any material other than a non-combustible material.

16 Continuous "B" class ceilings or linings are those "B" class ceilings or linings which terminate at an "A" or "B" class division.

17 Continuously manned central control station is a central control station which is continuously manned by a responsible member of the crew.

18 Control stations are those spaces in which the ship's radio or main navigating equipment or the emergency source of power is located or where the fire recording or fire control equipment is centralized. Spaces where the fire recording or fire control equipment is centralized are also considered to be a fire control station.

19 Crude oil is any oil occurring naturally in the earth whether or not treated to render it suitable for transportation and includes crude oil where certain distillate fractions may have been removed from or added to.

20 Dangerous goods are those goods referred to in regulation VII/2.

21 Deadweight is the difference in tonnes between the displacement of a ship in water of a specific gravity of 1.025 at the load waterline corresponding to the assigned summer freeboard and the lightweight of the ship.

22 Fire Safety Systems Code means the International Code for Fire Safety Systems as adopted by the Maritime Safety Committee of the Organization by resolution MSC.98(73), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I thereof.

23 Fire Test Procedures Code means the International Code for Application of Fire Test Procedures as adopted by the Maritime Safety Committee of the Organization by resolution MSC.61(67), as may be

amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I thereof.

24 Flashpoint is the temperature in degrees Celsius (closed cup test) at which a product will give off enough flammable vapour to be ignited, as determined by an approved flashpoint apparatus.

25 Gas carrier is a cargo ship constructed or adapted and used for the carriage in bulk of any liquefied gas or other products of a flammable nature listed in chapter 19 of the International Gas Carrier Code, as defined in regulation VII/11.1.

26 Helideck is a purpose-built helicopter landing area located on a ship including all structure, fire-fighting appliances and other equipment necessary for the safe operation of helicopters.

27 Helicopter facility is a helideck including any refuelling and hangar facilities.

28 Lightweight is the displacement of a ship in tonnes without cargo, fuel, lubricating oil, ballast water, fresh water and feedwater in tanks, consumable stores, and passengers and crew and their effects.

29 Low flame-spread means that the surface thus described will adequately restrict the spread of flame, this being determined in accordance with the Fire Test Procedures Code.

30 Machinery spaces are machinery spaces of category A and other spaces containing propulsion machinery, boilers, oil fuel units, steam and internal combustion engines, generators and major electrical machinery, oil filling stations, refrigerating, stabilizing, ventilation and air conditioning machinery, and similar spaces, and trunks to such spaces.

31 Machinery spaces of category A are those spaces and trunks to such spaces which contain either:

- .1 internal combustion machinery used for main propulsion;
- .2 internal combustion machinery used for purposes other than main propulsion where such machinery has in the aggregate a total power output of not less than 375 kW; or
- .3 any oil-fired boiler or oil fuel unit, or any oil-fired equipment other than boilers, such as inert gas generators, incinerators, etc.

32 Main vertical zones are those sections into which the hull, superstructure and deckhouses are divided by "A" class divisions, the mean length and width of which on any deck does not in general exceed 40 m.

33 Non-combustible material is a material which neither burns nor gives off flammable vapours in sufficient quantity for self-ignition when heated to approximately 750°C, this being determined in accordance with the Fire Test Procedures Code.

34 Oil fuel unit is the equipment used for the preparation of oil fuel for delivery to an oilfired boiler, or equipment used for the preparation for delivery of heated oil to an internal combustion engine, and includes any oil pressure pumps, filters and heaters dealing with oil at a pressure of more than 0.18 N/mm².

35 Open ro-ro spaces are those ro-ro spaces that are either open at both ends or have an opening at one end, and are provided with adequate natural ventilation effective over their entire length through permanent openings distributed in the side plating or deckhead or from above, having a total area of at least 10% of the total area of the space sides.

36 Open vehicle spaces are those vehicle spaces either open at both ends, or have an opening at one end and are provided with adequate natural ventilation effective over their entire length through permanent openings distributed in the side plating or deckhead or from above, having a total area of at least 10% of the total area of the space sides.

37 Passenger ship is a ship as defined in regulation I/2(f).

38 Prescriptive requirements means the construction characteristics, limiting dimensions, or fire safety systems specified in parts B, C, D, E or G.

39 Public spaces are those portions of the accommodation which are used for halls, dining rooms, lounges and similar permanently enclosed spaces.

40 Rooms containing furniture and furnishings of restricted fire risk, for the purpose of Regulation 9, are those rooms containing furniture and furnishings of restricted fire risk (whether cabins, public spaces, offices or other types of accommodation) in which:

- .1 case furniture such as desks, wardrobes, dressing tables, bureaux, dressers, are constructed entirely of approved non-combustible materials, except that a combustible veneer not exceeding 2 mm may be used on the working surface of such articles;
- .2 free-standing furniture such as chairs, sofas, tables, are constructed with frames of non-combustible materials;
- .3 draperies, curtains and other suspended textile materials have qualities of resistance to the propagation of flame not inferior to those of wool having a mass of mass 0.8 kg/m², this being determined in accordance with the Fire Test Procedures Code;
- .4 floor coverings have low flame-spread characteristics;
- .5 exposed surfaces of bulkheads, linings and ceilings have low flame-spread characteristics;
- .6 upholstered furniture has qualities of resistance to the ignition and propagation of flame, this being determined in accordance with the Fire Test Procedures Code; and

.7 bedding components have qualities of resistance to the ignition and propagation of flame, this being determined in accordance with the Fire Test Procedures Code.

41 Ro-ro spaces are spaces not normally subdivided in any way and normally extending to either a substantial length or the entire length of the ship in which motor vehicles with fuel in their tanks for their own propulsion and/or goods (packaged or in bulk, in or on rail or road cars, vehicles (including road or rail tankers), trailers, containers, pallets, demountable tanks or in or on similar stowage units or other receptacles) can be loaded and unloaded normally in a horizontal direction.

42 Ro-ro passenger ship means a passenger ship with ro-ro spaces or special category spaces.

43 Steel or other equivalent material means any non-combustible material which, by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable exposure to the standard fire test (e.g. aluminium alloy with appropriate insulation).

44 Sauna is a hot room with temperatures normally varying between 80°-120°C where the heat is provided by a hot surface (e.g. by an electrically-heated oven). The hot room may also include the space where the oven is located and adjacent bathrooms.

45 Service spaces are those spaces used for galleys, pantries containing cooking appliances, lockers, mail and specie rooms, storerooms, workshops other than those forming part of the machinery spaces, and similar spaces and trunks to such spaces.

46 Special category spaces are those enclosed vehicle spaces above and below the bulkhead deck, into and from which vehicles can be driven and to which passengers have access. Special category spaces may be accommodated on more than one deck provided that the total overall clear height for vehicles does not exceed 10 m.

47 A standard fire test is a test in which specimens of the relevant bulkheads or decks are exposed in a test furnace to temperatures corresponding approximately to the standard time-temperature curve in accordance with the test method specified in the Fire Test Procedures Code.

48 Tanker is a ship as defined in regulation I/2(h).

49 Vehicle spaces are cargo spaces intended for carriage of motor vehicles with fuel in their tanks for their own propulsion.

50 Weather deck is a deck which is completely exposed to the weather from above and from at least two sides.

PART B

PREVENTION OF FIRE AND EXPLOSION

Regulation 4

Probability of ignition

1 Purpose

The purpose of this regulation is to prevent the ignition of combustible materials or flammable liquids. For this purpose, the following functional requirements shall be met:

- .1 means shall be provided to control leaks of flammable liquids;
- .2 means shall be provided to limit the accumulation of flammable vapours;
- .3 the ignitability of combustible materials shall be restricted;
- .4 ignition sources shall be restricted;
- .5 ignition sources shall be separated from combustible materials and flammable liquids; and
- .6 the atmosphere in cargo tanks shall be maintained out of the explosive range.

2 Arrangements for oil fuel, lubrication oil and other flammable oils

2.1 Limitations in the use of oils as fuel

The following limitations shall apply to the use of oil as fuel:

- .1 except as otherwise permitted by this paragraph, no oil fuel with a flashpoint of less than 60°C shall be used;*
- .2 in emergency generators oil fuel with a flashpoint of not less than 43°C may be used;
- .3 the use of oil fuel having a flashpoint of less than 60°C but not less than 43°C may be permitted (e.g., for feeding the emergency fire pump's engines and the auxiliary machines which are not located in the machinery spaces of category A) subject to the following:
 - .3.1 fuel oil tanks except those arranged in double bottom compartments shall be located outside of machinery spaces of category A;
 - .3.2 provisions for the measurement of oil temperature are provided on the suction pipe of the oil fuel pump;
 - .3.3 stop valves and/or cocks are provided on the inlet side and outlet side of the oil fuel strainers; and
 - .3.4 pipe joints of welded construction or of circular cone type or spherical type union joint are applied as much as possible; and

* Refer to the Recommended procedures to prevent the illegal or accidental use of low flashpoint cargo oil as fuel adopted by the Organization by resolution A.565(14).

- .4 in cargo ships the use of fuel having a lower flashpoint than otherwise specified in paragraph 2.1, for example crude oil, may be permitted provided that such fuel is not stored in any machinery space and subject to the approval by the Administration of the complete installation.

2.1 Arrangements for oil fuel

In a ship in which oil fuel is used, the arrangements for the storage, distribution and utilization of the oil fuel shall be such as to ensure the safety of the ship and persons on board and shall at least comply with the following provisions.

2.2.1 Location of oil fuel systems

As far as practicable, parts of the oil fuel system containing heated oil under pressure exceeding 0.18 N/mm^2 shall not be placed in a concealed position such that defects and leakage cannot readily be observed. The machinery spaces in way of such parts of the oil fuel system shall be adequately illuminated.

2.2.2 Ventilation of machinery spaces

The ventilation of machinery spaces shall be sufficient under normal conditions to prevent accumulation of oil vapour.

2.2.3 Oil fuel tanks

2.2.3.1 Fuel oil, lubrication oil and other flammable oils shall not be carried in forepeak tanks.

2.2.3.2 As far as practicable, oil fuel tanks shall be part of the ship's structure and shall be located outside machinery spaces of category A. Where oil fuel tanks, other than double bottom tanks, are necessarily located adjacent to or within machinery spaces of category A, at least one of their vertical sides shall be contiguous to the machinery space boundaries, and shall preferably have a common boundary with the double bottom tanks, and the area of the tank boundary common with the machinery spaces shall be kept to a minimum. Where such tanks are situated within the boundaries of machinery spaces of category A they shall not contain oil fuel having a flashpoint of less than 60°C . In general, the use of free-standing oil fuel tanks shall be avoided. When such tanks are employed their use shall be prohibited in category A machinery spaces on passenger ships. Where permitted, they shall be placed in an oil-tight spill tray of ample size having a suitable drain pipe leading to a suitably sized spill oil tank.

2.2.3.3 No oil fuel tank shall be situated where spillage or leakage therefrom can constitute a fire or explosion hazard by falling on heated surfaces.

2.2.3.4 Oil fuel pipes, which, if damaged, would allow oil to escape from a storage, settling or daily service tank having a capacity of 500 l and above situated above the double bottom, shall be fitted with a cock or valve directly on the tank capable of being closed from a safe position outside the space concerned in the event of a fire occurring in the space in which such tanks are situated. In the special case of deep tanks situated in any shaft or pipe tunnel or similar space, valves on the tank

shall be fitted, but control in the event of fire may be effected by means of an additional valve on the pipe or pipes outside the tunnel or similar space. If such an additional valve is fitted in the machinery space it shall be operated from a position outside this space. The controls for remote operation of the valve for the emergency generator fuel tank shall be in a separate location from the controls for remote operation of other valves for tanks located in machinery spaces.

2.2.3.5 Safe and efficient means of ascertaining the amount of oil fuel contained in any oil fuel tank shall be provided.

2.2.3.5.1 Where sounding pipes are used, they shall not terminate in any space where the risk of ignition of spillage from the sounding pipe might arise. In particular, they shall not terminate in passenger or crew spaces. As a general rule, they shall not terminate in machinery spaces. However, where the Administration considers that these latter requirements are impracticable, it may permit termination of sounding pipes in machinery spaces on condition that all of the following requirements are met:

- .1 an oil-level gauge is provided meeting the requirements of paragraph 2.2.3.5.2;
- .2 the sounding pipes terminate in locations remote from ignition hazards unless precautions are taken, such as the fitting of effective screens, to prevent the oil fuel in the case of spillage through the terminations of the sounding pipes from coming into contact with a source of ignition; and
- .3 the termination of sounding pipes are fitted with self-closing blanking devices and with a small-diameter self-closing control cock located below the blanking device for the purpose of ascertaining before the blanking device is opened that oil fuel is not present. Provisions shall be made so as to ensure that any spillage of oil fuel through the control cock involves no ignition hazard.

2.2.3.5.2 Other oil-level gauges may be used in place of sounding pipes subject to the following conditions:

- .1 in passenger ships, such gauges shall not require penetration below the top of the tank and their failure or overfilling of the tanks shall not permit release of fuel; and
- .2 in cargo ships, the failure of such gauges or overfilling of the tank shall not permit release of fuel into the space. The use of cylindrical gauge glasses is prohibited. The Administration may permit the use of oil-level gauges with flat glasses and self-closing valves between the gauges and fuel tanks.

2.2.3.5.3 The means prescribed in paragraph 2.2.3.5.2 which are acceptable to the Administration shall be maintained in the proper condition to ensure their continued accurate functioning in service.

2.2.4 Prevention of overpressure

Provisions shall be made to prevent overpressure in any oil tank or in

any part of the oil fuel system, including the filling pipes served by pumps on board. Air and overflow pipes and relief valves shall discharge to a position where there is no risk of fire or explosion from the emergence of oils and vapour and shall not lead into crew spaces, passenger spaces nor into special category spaces, closed ro-ro spaces, machinery spaces or similar spaces.

2.2.5 Oil fuel piping

2.2.5.1 Oil fuel pipes and their valves and fittings shall be of steel or other approved material, except that restricted use of flexible pipes shall be permissible in positions where the Administration is satisfied that they are necessary.* Such flexible pipes and end attachments shall be of approved fire-resisting materials of adequate strength and shall be constructed to the satisfaction of the Administration. For valves, fitted to oil fuel tanks and which are under static pressure, steel or spheroidal-graphite cast iron may be accepted. However, ordinary cast iron valves may be used in piping systems where the design pressure is lower than 7 bar and the design temperature is below 60°C.

2.2.5.2 External high-pressure fuel delivery lines between the high-pressure fuel pumps and fuel injectors shall be protected with a jacketed piping system capable of containing fuel from a high-pressure line failure. A jacketed pipe incorporates an outer pipe into which the high-pressure fuel pipe is placed, forming a permanent assembly. The jacketed piping system shall include a means for collection of leakages and arrangements shall be provided with an alarm in case of a fuel line failure.

2.2.5.3 Oil fuel lines shall not be located immediately above or near units of high temperature including boilers, steam pipelines, exhaust manifolds, silencers or other equipment required to be insulated by paragraph 2.2.6. As far as practicable, oil fuel lines shall be arranged far apart from hot surfaces, electrical installations or other sources of ignition and shall be screened or otherwise suitably protected to avoid oil spray or oil leakage onto the sources of ignition. The number of joints in such piping systems shall be kept to a minimum.

2.2.5.4 Components of a diesel engine fuel system shall be designed considering the maximum peak pressure which will be experienced in service, including any high pressure pulses which are generated and transmitted back into the fuel supply and spill lines by the action of fuel injection pumps. Connections within the fuel supply and spill lines shall be constructed having regard to their ability to prevent pressurized oil fuel leaks while in service and after maintenance.

* Refer to recommendations published by the International Organization for Standardization, in particular, Publications ISO 15540:1999 on Test methods for fire resistance of hose assemblies and ISO 15541:1999 on Requirements for the test bench of fire resistance of hose assemblies.

2.2.5.5 In multi-engine installations which are supplied from the same fuel source, means of isolating the fuel supply and spill piping to individual engines, shall be provided. The means of isolation shall not affect the operation of the other engines and shall be operable from a position not rendered inaccessible by a fire on any of the engines.

2.2.5.6 Where the Administration may permit the conveying of oil and combustible liquids through accommodation and service spaces, the pipes conveying oil or combustible liquids shall be of a material approved by the Administration having regard to the fire risk.

2.2.6 Protection of high temperature surfaces

2.2.6.1 Surfaces with temperatures above 220°C which may be impinged as a result of a fuel system failure shall be properly insulated.

2.2.6.2 Precautions shall be taken to prevent any oil that may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces.

2.3 Arrangements for lubricating oil

2.3.1 The arrangements for the storage, distribution and utilization of oil used in pressure lubrication systems shall be such as to ensure the safety of the ship and persons on board. The arrangements made in machinery spaces of category A, and whenever practicable in other machinery spaces, shall at least comply with the provisions of paragraphs 2.2.1, 2.2.3.3, 2.2.3.4, 2.2.3.5, 2.2.4, 2.2.5.1, 2.2.5.3 and 2.2.6, except that:

- .1 this does not preclude the use of sight-flow glasses in lubricating systems provided that they are shown by testing to have a suitable degree of fire resistance; and
- .2 sounding pipes may be authorized in machinery spaces; however, the requirements of paragraphs 2.2.3.5.1.1 and 2.2.3.5.1.3 need not be applied on condition that the sounding pipes are fitted with appropriate means of closure.

2.3.2 The provisions of paragraph 2.2.3.4 shall also apply to lubricating oil tanks except those having a capacity less than 500 l, storage tanks on which valves are closed during the normal operation mode of the ship, or where it is determined that an unintended operation of a quick closing valve on the oil lubricating tank would endanger the safe operation of the main propulsion and essential auxiliary machinery.

2.4 Arrangements for other flammable oils

The arrangements for the storage, distribution and utilization of other flammable oils employed under pressure in power transmission systems, control and activating systems and heating systems shall be such as to ensure the safety of the ship and persons on board. Suitable oil collecting arrangements for leaks shall be fitted below hydraulic valves and cylinders. In locations where means of ignition are present, such arrangements shall at least comply with the provisions of paragraphs 2.2.3.3, 2.2.3.5, 2.2.5.3 and 2.2.6 and with the provisions of paragraphs 2.2.4 and 2.2.5.1 in respect of strength and construction.

2.5 Arrangements for oil fuel in periodically unattended machinery spaces

In addition to the requirements of paragraphs 2.1 to 2.4, the oil fuel and lubricating oil systems in a periodically unattended machinery space shall comply with the following:

- .1 where daily service oil fuel tanks are filled automatically, or by remote control, means shall be provided to prevent overflow spillages. Other equipment which treats flammable liquids automatically (e.g. oil fuel purifiers) which, whenever practicable, shall be installed in a special space reserved for purifiers and their heaters, shall have arrangements to prevent overflow spillages; and
- .2 where daily service oil fuel tanks or settling tanks are fitted with heating arrangements, a high temperature alarm shall be provided if the flashpoint of the oil fuel can be exceeded.

3 Arrangements for gaseous fuel for domestic purpose

Gaseous fuel systems used for domestic purposes shall be approved by the Administration. Storage of gas bottles shall be located on the open deck or in a well ventilated space which opens only to the open deck.

4 Miscellaneous items of ignition sources and ignitability

4.1 Electric radiators

Electric radiators, if used, shall be fixed in position and so constructed as to reduce fire risks to a minimum. No such radiators shall be fitted with an element so exposed that clothing, curtains, or other similar materials can be scorched or set on fire by heat from the element.

4.2 Waste receptacles

Waste receptacles shall be constructed of non-combustible materials with no openings in the sides or bottom.

4.3 Insulation surfaces protected against oil penetration

In spaces where penetration of oil products is possible, the surface of insulation shall be impervious to oil or oil vapours.

4.4 Primary deck coverings

Primary deck coverings, if applied within accommodation and service spaces and control stations, shall be of approved material which will not readily ignite, this being determined in accordance with the Fire Test Procedures Code.

5 Cargo areas of tankers

5.1 Separation of cargo oil tanks

5.1.1 Cargo pump-rooms, cargo tanks, slop tanks and cofferdams shall be positioned forward of machinery spaces. However, oil fuel bunker tanks need not be forward of machinery spaces. Cargo tanks and slop tanks shall be isolated from machinery spaces by cofferdams, cargo pump-rooms, oil bunker tanks or ballast tanks. Pump-rooms containing pumps and their accessories for ballasting those spaces situated adjacent to cargo tanks and slop tanks and pumps for oil fuel transfer, shall be considered as equivalent to a cargo pump-room within the context of this

regulation provided that such pump-rooms have the same safety standard as that required for cargo pump-rooms. Pump-rooms intended solely for ballast or oil fuel transfer, however, need not comply with the requirements of regulation 10.9. The lower portion of the pump-room may be recessed into machinery spaces of category A to accommodate pumps, provided that the deck head of the recess is in general not more than one third of the moulded depth above the keel, except that in the case of ships of not more than 25,000 tonnes deadweight, where it can be demonstrated that for reasons of access and satisfactory piping arrangements this is impracticable, the Administration may permit a recess in excess of such height, but not exceeding one half of the moulded depth above the keel.

5.1.2 Main cargo control stations, control stations, accommodation and service spaces (excluding isolated cargo handling gear lockers) shall be positioned aft of cargo tanks, slop tanks, and spaces which isolate cargo or slop tanks from machinery spaces, but not necessarily aft of the oil fuel bunker tanks and ballast tanks, and shall be arranged in such a way that a single failure of a deck or bulkhead shall not permit the entry of gas or fumes from the cargo tanks into an accommodation space, main cargo control stations, control station, or service spaces. A recess provided in accordance with paragraph 5.1.1 need not be taken into account when the position of these spaces is being determined.

5.1.3 However, where deemed necessary, the Administration may permit main cargo control stations, control stations, accommodation and service spaces forward of the cargo tanks, slop tanks and spaces which isolate cargo and slop tanks from machinery spaces, but not necessarily forward of oil fuel bunker tanks or ballast tanks. Machinery spaces, other than those of category A, may be permitted forward of the cargo tanks and slop tanks provided they are isolated from the cargo tanks and slop tanks by cofferdams, cargo pump-rooms, oil fuel bunker tanks or ballast tanks, and have at least one portable fire extinguisher. In cases where they contain internal combustion machinery, one approved foam-type extinguisher of at least 45 l capacity or equivalent shall be arranged in addition to portable fire extinguishers. If operation of a semi-portable fire extinguisher is impracticable, this fire extinguisher may be replaced by two additional portable fire extinguishers. Accommodation spaces, main cargo control spaces, control stations and service spaces shall be arranged in such a way that a single failure of a deck or bulkhead shall not permit the entry of gas or fumes from the cargo tanks into such spaces. In addition, where deemed necessary for the safety or navigation of the ship, the Administration may permit machinery spaces containing internal combustion machinery not being main propulsion machinery having an output greater than 375 kW to be located forward of the cargo area provided the arrangements are in accordance with the provisions of this paragraph.

5.1.4 In combination carriers only:

.1 The slop tanks shall be surrounded by cofferdams except where

the boundaries of the slop tanks, where slop may be carried on dry cargo voyages, are part of the hull, main cargo deck, cargo pump-room bulkhead or oil fuel bunker tank. These cofferdams shall not be open to a double bottom, pipe tunnel, pump-room or other enclosed space, nor shall they be used for cargo or ballast and shall not be connected to piping systems serving oil cargo or ballast. Means shall be provided for filling the cofferdams with water and for draining them. Where the boundary of a slop tank is part of the cargo pump-room bulkhead, the pump-room shall not be open to the double bottom, pipe tunnel or other enclosed space; however, openings provided with gastight bolted covers may be permitted;

- .2 Means shall be provided for isolating the piping connecting the pump-room with the slop tanks referred to in paragraph 5.1.4.1. The means of isolation shall consist of a valve followed by a spectacle flange or a spool piece with appropriate blank flanges. This arrangement shall be located adjacent to the slop tanks, but where this is unreasonable or impracticable, it may be located within the pump-room directly after the piping penetrates the bulkhead. A separate permanently installed pumping and piping arrangement incorporating a manifold, provided with a shut-off valve and a blank flange, shall be provided for discharging the contents of the slop tanks directly to the open deck for disposal to shore reception facilities when the ship is in the dry cargo mode. When the transfer system is used for slop transfer in the dry cargo mode, it shall have no connection to other systems. Separation from other systems by means of removal of spool pieces may be accepted;
- .3 Hatches and tank cleaning openings to slop tanks shall only be permitted on the open deck and shall be fitted with closing arrangements. Except where they consist of bolted plates with bolts at watertight spacing, these closing arrangements shall be provided with locking arrangements under the control of the responsible ship's officer; and
- .4 Where cargo wing tanks are provided, cargo oil lines below deck shall be installed inside these tanks. However, the Administration may permit cargo oil lines to be placed in special ducts provided they are capable of being adequately cleaned and ventilated to the satisfaction of the Administration. Where cargo wing tanks are not provided, cargo oil lines below deck shall be placed in special ducts.

5.1.5 Where the fitting of a navigation position above the cargo area is shown to be necessary, it shall be for navigation purposes only and it shall be separated from the cargo tank deck by means of an open space with a height of at least 2 m. The fire protection requirements for such a navigation position shall be that required for control stations, as specified in regulation 9.2.4.2 and other provisions for tankers, as applicable.

5.1.6 Means shall be provided to keep deck spills away from the accommodation and service areas. This may be accomplished by provision of a permanent continuous coaming of a height of at least 300 mm, extending from side to side. Special consideration shall be given to the arrangements associated with stern loading.

5.2 Restriction on boundary openings

5.2.1 Except as permitted in paragraph 5.2.2, access doors, air inlets and openings to accommodation spaces, service spaces, control stations and machinery spaces shall not face the cargo area. They shall be located on the transverse bulkhead not facing the cargo area or on the outboard side of the superstructure or deckhouse at a distance of at least 4% of the length of the ship but not less than 3 m from the end of the superstructure or deckhouse facing the cargo area. This distance need not exceed 5 m.

5.2.2 The Administration may permit access doors in boundary bulkheads facing the cargo area or within the 5 m limits specified in paragraph 5.2.1, to main cargo control stations and to such service spaces used as provision rooms, store-rooms and lockers, provided they do not give access directly or indirectly to any other space containing or providing for accommodation, control stations or service spaces such as galleys, pantries or workshops, or similar spaces containing sources of vapour ignition. The boundary of such a space shall be insulated to "A-60" standard, with the exception of the boundary facing the cargo area. Bolted plates for the removal of machinery may be fitted within the limits specified in paragraph 5.2.1. Wheelhouse doors and windows may be located within the limits specified in paragraph 5.2.1 so long as they are designed to ensure that the wheelhouse can be made rapidly and efficiently gas and vapour tight.

5.2.3 Windows and sidescuttles facing the cargo area and on the sides of the superstructures and deckhouses within the limits specified in paragraph 5.2.1 shall be of the fixed (non-opening) type. Such windows and sidescuttles, except wheelhouse windows, shall be constructed to "A-60" class standard.

5.2.4 Where there is permanent access from a pipe tunnel to the main pump-room, a watertight door shall be fitted complying with the requirements of regulation II-1/25-9.2 and, in addition, with the following:

- .1 in addition to the bridge operation, the watertight door shall be capable of being manually closed from outside the main pump-room entrance; and
- .2 the watertight door shall be kept closed during normal operations of the ship except when access to the pipe tunnel is required.

5.2.5 Permanent approved gastight lighting enclosures for illuminating cargo pump-rooms may be permitted in bulkheads and decks separating cargo pump-rooms and other spaces provided they are of adequate strength and the integrity and gastightness of the bulkhead or deck is maintained.

5.2.6 The arrangement of ventilation inlets and outlets and other deckhouse and superstructure boundary space openings shall be such as to complement the provisions of paragraph 5.3 and regulation 11.6. Such vents, especially for machinery spaces, shall be situated as far aft as practicable. Due consideration in this regard shall be given when the ship is equipped to load or discharge at the stern. Sources of ignition such as electrical equipment shall be so arranged as to avoid an explosion hazard.

5.3 Cargo tank venting

5.3.1 General requirements

The venting systems of cargo tanks are to be entirely distinct from the air pipes of the other compartments of the ship. The arrangements and position of openings in the cargo tank deck from which emission of flammable vapours can occur shall be such as to minimize the possibility of flammable vapours being admitted to enclosed spaces containing a source of ignition, or collecting in the vicinity of deck machinery and equipment which may constitute an ignition hazard. In accordance with this general principle, the criteria in paragraphs 5.3.2 to 5.3.5 and regulation 11.6 will apply.

5.3.2 Venting arrangements

5.3.2.1 The venting arrangements in each cargo tank may be independent or combined with other cargo tanks and may be incorporated into the inert gas piping.

5.3.2.2 Where the arrangements are combined with other cargo tanks, either stop valves or other acceptable means shall be provided to isolate each cargo tank. Where stop valves are fitted, they shall be provided with locking arrangements which shall be under the control of the responsible ship's officer. There shall be a clear visual indication of the operational status of the valves or other acceptable means. Where tanks have been isolated, it shall be ensured that relevant isolating valves are opened before cargo loading or ballasting or discharging of those tanks is commenced. Any isolation must continue to permit the flow caused by thermal variations in a cargo tank in accordance with Regulation 11.6.1.1.

5.3.2.3 If cargo loading and ballasting or discharging of a cargo tank or cargo tank group is intended, which is isolated from a common venting system, that cargo tank or cargo tank group shall be fitted with a means for over-pressure or under-pressure protection as required in regulation 11.6.3.2.

5.3.2.4 The venting arrangements shall be connected to the top of each cargo tank and shall be self-draining to the cargo tanks under all normal conditions of trim and list of the ship. Where it may not be possible to provide self-draining lines, permanent arrangements shall be provided to drain the vent lines to a cargo tank.

5.3.3 Safety devices in venting systems

The venting system shall be provided with devices to prevent the passage of flame into the cargo tanks. The design, testing and locating of these devices shall comply with the requirements established by the

Administration based on the guidelines developed by the Organization.* Ullage openings shall not be used for pressure equalization. They shall be provided with self-closing and tightly sealing covers. Flame arresters and screens are not permitted in these openings.

5.3.4 Vent outlets for cargo handling and ballasting

5.3.4.1 Vent outlets for cargo loading, discharging and ballasting required by Regulation 11.6.1.2 shall:

- .1 .1 permit the free flow of vapour mixtures; or
- .1 .2 permit the throttling of the discharge of the vapour mixtures to achieve a velocity of not less than 30 m/s;
- .2 be so arranged that the vapour mixture is discharged vertically upwards;
- .3 where the method is by free flow of vapour mixtures, be such that the outlet shall be not less than 6 m above the cargo tank deck or fore and aft gangway if situated within 4 m of the gangway and located not less than 10 m measured horizontally from the nearest air intakes and openings to enclosed spaces containing a source of ignition and from deck machinery, which may include anchor windlass and chain locker openings, and equipment which may constitute an ignition hazard; and
- .4 where the method is by high-velocity discharge, be located at a height not less than 2 m above the cargo tank deck and not less than 10 m measured horizontally from the nearest air intakes and openings to enclosed spaces containing a source of ignition and from deck machinery, which may include anchor windlass and chain locker openings, and equipment which may constitute an ignition hazard. These outlets shall be provided with high velocity devices of an approved type.

5.3.4.2 The arrangements for the venting of vapours displaced from the cargo tanks during loading and ballasting shall comply with paragraph 5.3 and regulation 11.6 and shall consist of either one or more mast risers, or a number of high-velocity vents. The inert gas supply main may be used for such venting.

5.3.5 Isolation of slop tanks in combination carriers

In combination carriers, the arrangements for isolating slop tanks containing oil or oil residues from other cargo tanks shall consist of blank flanges which will remain in position at all times when cargoes other than liquid cargoes referred to in regulation 1.6.1 are carried.

5.4 Ventilation

5.4.1 Ventilation systems in cargo pump-rooms

Cargo pump-rooms shall be mechanically ventilated and discharges

* Refer to MSC/Circ.677 on Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers and to MSC/Circ.450/Rev.1 on Revised factors to be taken into consideration when designing cargo tank venting and gas-freeing arrangements.

from the exhaust fans shall be led to a safe place on the open deck. The ventilation of these rooms shall have sufficient capacity to minimize the possibility of accumulation of flammable vapours. The number of air changes shall be at least 20 per hour, based upon the gross volume of the space. The air ducts shall be arranged so that all of the space is effectively ventilated. The ventilation shall be of the suction type using fans of the non-sparking type.

5.4.2 Ventilation systems in combination carriers

In combination carriers, cargo spaces and any enclosed spaces adjacent to cargo spaces shall be capable of being mechanically ventilated. The mechanical ventilation may be provided by portable fans. An approved fixed gas warning system capable of monitoring flammable vapours shall be provided in cargo pump-rooms, pipe ducts and cofferdams, as referred to in paragraph 5.1.4, adjacent to slop tanks. Suitable arrangements shall be made to facilitate measurement of flammable vapours in all other spaces within the cargo area. Such measurements shall be made possible from the open deck or easily accessible positions.

5.5 Inert gas systems

5.5.1 Application

5.5.1.1 For tankers of 20,000 tonnes deadweight and upwards, the protection of the cargo tanks shall be achieved by a fixed inert gas system in accordance with the requirements of the Fire Safety Systems Code, except that, in lieu of the above, the Administration, after having given consideration to the ship's arrangement and equipment, may accept other fixed installations if they afford protection equivalent to the above, in accordance with regulation I/5. The requirements for alternative fixed installations shall comply with the requirements in paragraph 5.5.4.

5.5.1.2 Tankers operating with a cargo tank cleaning procedure using crude oil washing shall be fitted with an inert gas system complying with the Fire Safety Systems Code and with fixed tank washing machines.

5.5.1.3 Tankers required to be fitted with inert gas systems shall comply with the following provisions:

- .1 double hull spaces shall be fitted with suitable connections for the supply of inert gas;
- .2 where hull spaces are connected to a permanently fitted inert gas distribution system, means shall be provided to prevent hydrocarbon gases from the cargo tanks entering the double hull spaces through the system; and
- .3 where such spaces are not permanently connected to an inert gas distribution system, appropriate means shall be provided to allow connection to the inert gas main.

5.5.2 Inert gas systems of chemical tankers and gas carriers

The requirements for inert gas systems contained in the Fire Safety Systems Code need not be applied to:

- .1 chemical tankers and gas carriers when carrying cargoes described in Regulation 1.6.1, provided that they comply with the

requirements for inert gas systems on chemical tankers established by the Administration, based on the guidelines developed by the Organization;¹⁾ or

- .2 chemical tankers and gas carriers when carrying flammable cargoes other than crude oil or petroleum products such as cargoes listed in chapters 17 and 18 of the International Bulk Chemical Code, provided that the capacity of tanks used for their carriage does not exceed 3,000 m³ and the individual nozzle capacities of tank washing machines do not exceed 17.5 m³ /h and the total combined throughput from the number of machines in use in a cargo tank at any one time does not exceed 110 m³/h.

5.5.3 General requirements for inert gas systems

5.5.3.1 The inert gas system shall be capable of inerting, purging and gas-freeing empty tanks and maintaining the atmosphere in cargo tanks with the required oxygen content.

5.5.3.2 The inert gas system referred to in paragraph 5.5.3.1 shall be designed, constructed and tested in accordance with the Fire Safety Systems Code.

5.5.3.3 Tankers fitted with a fixed inert gas system shall be provided with a closed ullage system.

5.5.4 Requirements for equivalent systems

5.5.4.1 Where an installation equivalent to a fixed inert gas system is installed, it shall:

- .1 be capable of preventing dangerous accumulations of explosive mixtures in intact cargo tanks during normal service throughout the ballast voyage and necessary in-tank operations; and
- .2 be so designed as to minimize the risk of ignition from the generation of static electricity by the system itself.

5.6 Inerting, purging and gas-freeing

5.6.1 Arrangements for purging and/or gas-freeing shall be such as to minimize the hazards due to dispersal of flammable vapours in the atmosphere and to flammable mixtures in a cargo tank.

5.6.2 The procedure for cargo tank purging and/or gas-freeing shall be carried out in accordance with regulation 16.3.2.

5.6.3 The arrangements for inerting, purging or gas-freeing of empty tanks as required in paragraph 5.5.3.1 shall be to the satisfaction of the Administration and shall be such that the accumulation of hydrocarbon vapours in pockets formed by the internal structural members in a tank is minimized and that:

- .1 on individual cargo tanks, the gas outlet pipe, if fitted, shall be positioned as far as practicable from the inert gas/air inlet and in accordance with paragraph 5.3 and regulation 11.6. The inlet of such outlet pipes may be located either at deck level or at not more than 1 m above the bottom of the tank;

* Refer to the Regulation for inert gas systems on chemical tankers adopted by the Organization by resolution A.567(14) and Corr.1.

- .2 the cross-sectional area of such gas outlet pipe referred to in paragraph 5.6.3.1 shall be such that an exit velocity of at least 20 m/s can be maintained when any three tanks are being simultaneously supplied with inert gas. Their outlets shall extend not less than 2 m above deck level; and
- .3 each gas outlet referred to in paragraph 5.6.3.2 shall be fitted with suitable blanking arrangements.

5.7 Gas measurement

5.7.1 Portable instrument

Tankers shall be equipped with at least one portable instrument for measuring flammable vapour concentrations, together with a sufficient set of spares. Suitable means shall be provided for the calibration of such instruments.

5.7.2 Arrangements for gas measurement in double hull and double bottom spaces

5.7.2.1 Suitable portable instruments for measuring oxygen and flammable vapour concentrations shall be provided. In selecting these instruments, due attention shall be given to their use in combination with the fixed gas-sampling-line systems referred to in paragraph 5.7.2.2.

5.7.2.2 Where the atmosphere in double hull spaces cannot be reliably measured using flexible gas sampling hoses, such spaces shall be fitted with permanent gas sampling lines. The configuration of gas sampling lines shall be adapted to the design of such spaces.

5.7.2.3 The materials of construction and the dimensions of gas sampling lines shall be such as to prevent restriction. Where plastic materials are used, they shall be electrically conductive.

5.8 Air supply to double hull and double bottom spaces

Double hull and double bottom spaces shall be fitted with suitable connections for the supply of air.

5.9 Protection of cargo area

Drip pans for collecting cargo residues in cargo lines and hoses shall be provided in the area of pipe and hose connections under the manifold area. Cargo hoses and tank washing hoses shall have electrical continuity over their entire lengths including couplings and flanges (except shore connections) and shall be earthed for removal of electrostatic charges.

5.10 Protection of cargo pump-rooms

5.10.1 In tankers:

- .1 cargo pumps, ballast pumps and stripping pumps, installed in cargo pumprooms and driven by shafts passing through pump-room bulkheads shall be fitted with temperature sensing devices for bulkhead shaft glands, bearings and pump casings. A continuous audible and visual alarm signal shall be automatically effected in the cargo control room or the pump control station;
- .2 lighting in cargo pump-rooms, except emergency lighting, shall be interlocked with ventilation such that the ventilation shall be in operation when switching on the lighting. Failure of the ven-

- tilation system shall not cause the lighting to go out;
- .3 a system for continuous monitoring of the concentration of hydrocarbon gases shall be fitted. Sampling points or detector heads shall be located in suitable positions in order that potentially dangerous leakages are readily detected. When the hydrocarbon gas concentration reaches a pre-set level which shall not be higher than 10% of the lower flammable limit, a continuous audible and visual alarm signal shall be automatically effected in the pump-room, engine control room, cargo control room and navigation bridge to alert personnel to the potential hazard; and
 - .4 all pump-rooms shall be provided with bilge level monitoring devices together with appropriately located alarms.

Regulation 5

Fire growth potential

1 Purpose

The purpose of this regulation is to limit the fire growth potential in every space of the ship.

For this purpose, the following functional requirements shall be met:

- .1 means of control for the air supply to the space shall be provided;
 - .2 means of control for flammable liquids in the space shall be provided; and
 - .3 the use of combustible materials shall be restricted.
- ###### 2. Control of air supply and flammable liquid to the space
- ###### 2.1 Closing appliances and stopping devices of ventilation
- ###### 2.1.1 The main inlets and outlets of all ventilation systems shall be capable of being closed from outside the spaces being ventilated. The means of closing shall be easily accessible as well as prominently and permanently marked and shall indicate whether the shut-off is open or closed.
- ###### 2.1.2 Power ventilation of accommodation spaces, service spaces, cargo spaces, control stations and machinery spaces shall be capable of being stopped from an easily accessible position outside the space being served. This position shall not be readily cut off in the event of a fire in the spaces served.
- ###### 2.1.3 In passenger ships carrying more than 36 passengers, power ventilation, except machinery space and cargo space ventilation and any alternative system which may be required under regulation 8.2, shall be fitted with controls so grouped that all fans may be stopped from either of two separate positions which shall be situated as far apart as practicable. Fans serving power ventilation systems to cargo spaces shall be capable of being stopped from a safe position outside such spaces.
- ###### 2.2 Means of control in machinery spaces

2.2.1 Means of control shall be provided for opening and closure of skylights, closure of openings in funnels which normally allow exhaust ventilation and closure of ventilator dampers.

2.2.2 Means of control shall be provided for stopping ventilating fans. Controls provided for the power ventilation serving machinery spaces shall be grouped so as to be operable from two positions, one of which shall be outside such spaces. The means provided for stopping the power ventilation of the machinery spaces shall be entirely separate from the means provided for stopping ventilation of other spaces.

2.2.3 Means of control shall be provided for stopping forced and induced draught fans, oil fuel transfer pumps, oil fuel unit pumps, lubricating oil service pumps, thermal oil circulating pumps and oil separators (purifiers). However, paragraphs 2.2.4 and 2.2.5 need not apply to oily water separators.

2.2.4 The controls required in paragraphs 2.2.1 to 2.2.3 and in regulation 4.2.2.3.4 shall be located outside the space concerned so they will not be cut off in the event of fire in the space they serve.

2.2.5 In passenger ships, the controls required in paragraphs 2.2.1 to 2.2.4 and in Regulations 8.3.3 and 9.5.2.3 and the controls for any required fire-extinguishing system shall be situated at one control position or grouped in as few positions as possible to the satisfaction of the Administration. Such positions shall have a safe access from the open deck.

2.3 Additional requirements for means of control in periodically unattended machinery spaces

2.3.1 For periodically unattended machinery spaces, the Administration shall give special consideration to maintaining the fire integrity of the machinery spaces, the location and centralization of the fire-extinguishing system controls, the required shutdown arrangements (e.g. ventilation, fuel pumps, etc.) and that additional fire-extinguishing appliances and other fire-fighting equipment and breathing apparatus may be required.

2.3.2 In passenger ships, these requirements shall be at least equivalent to those of machinery spaces normally attended.

3 Fire protection materials

3.1 Use of non-combustible materials

3.1.1 Insulating materials

Insulating materials shall be non-combustible, except in cargo spaces, mail rooms, baggage rooms and refrigerated compartments of service spaces. Vapour barriers and adhesives used in conjunction with insulation, as well as the insulation of pipe fittings for cold service systems, need not be of non-combustible materials, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have low flame-spread characteristics.

3.1.2 Ceilings and linings

3.1.2.1 In passenger ships, except in cargo spaces, all linings, grounds,

draught stops and ceilings shall be of non-combustible material except in mail rooms, baggage rooms, saunas or refrigerated compartments of service spaces. Partial bulkheads or decks used to subdivide a space for utility or artistic treatment shall also be of non-combustible materials.

3.1.2.2 In cargo ships, all linings, ceilings, draught stops and their associated grounds shall be of non-combustible materials in the following spaces:

- .1 in accommodation and service spaces and control stations for ships where Method IC is specified as referred to in regulation 9.2.3.1; and
- .2 in corridors and stairway enclosures serving accommodation and service spaces and control stations for ships where Method IIC and IIIC are specified as referred to in regulation 9.2.3.1.

3.2 Use of combustible materials

3.2.1 General

3.2.1.1 In passenger ships, "A", "B" or "C" class divisions in accommodation and services spaces which are faced with combustible materials, facings, mouldings, decorations and veneers shall comply with the provisions of paragraphs 3.2.2 to 3.2.4 and regulation 6. However, traditional wooden benches and wooden linings on bulkheads and ceilings are permitted in saunas and such materials need not be subject to the calculations prescribed in paragraphs 3.2.2 and 3.2.3.

3.2.1.2 In cargo ships, non-combustible bulkheads, ceilings and linings fitted in accommodation and service spaces may be faced with combustible materials, facings, mouldings, decorations and veneers provided such spaces are bounded by non-combustible bulkheads, ceilings and linings in accordance with the provisions of paragraphs 3.2.2 to 3.2.4 and regulation 6.

3.2.2 Maximum calorific value of combustible materials

Combustible materials used on the surfaces and linings specified in paragraph 3.2.1 shall have a calorific value* not exceeding 45 MJ/m² of the area for the thickness used. The requirements of this paragraph are not applicable to the surfaces of furniture fixed to linings or bulkheads.

3.2.3 Total volume of combustible materials

Where combustible materials are used in accordance with paragraph 3.2.1, they shall comply with the following requirements:

- .1 The total volume of combustible facings, mouldings, decorations and veneers in accommodation and service spaces shall not exceed a volume equivalent to 2.5 mm veneer on the combined area of the walls and ceiling linings. Furniture fixed to linings, bulkheads or decks need not be included in the calculation of the total volume of combustible materials; and
- .2 In the case of ships fitted with an automatic sprinkler system

* Refer to the recommendations published by the International Organization for Standardization, in particular, Publication ISO 1716:1973 on Determination of calorific potential.

complying with the provisions of the Fire Safety Systems Code, the above volume may include some combustible material used for erection of "C" class divisions.

3.2.4 Low flame-spread characteristics of exposed surfaces

The following surfaces shall have low flame-spread characteristics in accordance with the Fire Test Procedures Code:

3.2.4.1 In passenger ships:

- .1 exposed surfaces in corridors and stairway enclosures and of bulkhead and ceiling linings in accommodation and service spaces (except saunas) and control stations; and
- .2 surfaces and grounds in concealed or inaccessible spaces in accommodation and service spaces and control stations.

3.2.4.2 In cargo ships:

- .1 exposed surfaces in corridors and stairway enclosures and of ceilings in accommodation and service spaces (except saunas) and control stations; and
- .2 surfaces and grounds in concealed or inaccessible spaces in accommodation and service spaces and control stations.

3.3 Furniture in stairway enclosures of passenger ships

Furniture in stairway enclosures shall be limited to seating. It shall be fixed, limited to six seats on each deck in each stairway enclosure, be of restricted fire risk determined in accordance with the Fire Test Procedure Code, and shall not restrict the passenger escape route. The Administration may permit additional seating in the main reception area within a stairway enclosure if it is fixed, non-combustible and does not restrict the passenger escape route. Furniture shall not be permitted in passenger and crew corridors forming escape routes in cabin areas. In addition to the above, lockers of non-combustible material, providing storage for non-hazardous safety equipment required by these regulations, may be permitted. Drinking water dispensers and ice cube machines may be permitted in corridors provided they are fixed and do not restrict the width of the escape routes. This applies as well to decorative flower or plant arrangements, statues or other objects of art such as paintings and tapestries in corridors and stairways.

Regulation 6

Smoke generation potential and toxicity

1 Purpose

The purpose of this regulation is to reduce the hazard to life from smoke and toxic products generated during a fire in spaces where persons normally work or live. For this purpose, the quantity of smoke and toxic products released from combustible materials, including surface finishes, during fire shall be limited.

2. Paints, varnishes and other finishes

Paints, varnishes and other finishes used on exposed interior surfaces shall not be capable of producing excessive quantities of smoke and toxic products, this being determined in accordance with the Fire Test Procedures Code.

3 Primary deck coverings

Primary deck coverings, if applied within accommodation and service spaces and control stations, shall be of approved material which will not give rise to smoke or toxic or explosive hazards at elevated temperatures, this being determined in accordance with the Fire Test Procedures Code.

PART C

SUPPRESSION OF FIRE

Regulation 7

Detection and alarm

1 Purpose

The purpose of this regulation is to detect a fire in the space of origin and to provide for alarm for safe escape and fire-fighting activity. For this purpose, the following functional requirements shall be met:

- .1 fixed fire detection and fire alarm system installations shall be suitable for the nature of the space, fire growth potential and potential generation of smoke and gases;
- .2 manually operated call points shall be placed effectively to ensure a readily accessible means of notification; and
- .3 fire patrols shall provide an effective means of detecting and locating fires and alerting the navigation bridge and fire teams.

2. General requirements

2.1 A fixed fire detection and fire alarm system shall be provided in accordance with the provisions of this regulation.

2.2 A fixed fire detection and fire alarm system and a sample extraction smoke detection system required in this regulation and other regulations in this part shall be of an approved type and comply with the Fire Safety Systems Code.

2.3 Where a fixed fire detection and fire alarm system is required for the protection of spaces other than those specified in paragraph 5.1, at least one detector complying with the Fire Safety Systems Code shall be installed in each such space.

3 Initial and periodical tests

3.1 The function of fixed fire detection and fire alarm systems required by the relevant regulations of this chapter shall be tested under varying conditions of ventilation after installation.

3.2 The function of fixed fire detection and fire alarm systems shall be periodically tested to the satisfaction of the Administration by means of equipment producing hot air at the appropriate temperature, or smoke or aerosol particles having the appropriate range of density or particle size, or other phenomena associated with incipient fires to which the detector is designed to respond.

4 Protection of machinery spaces

4.1 Installation

A fixed fire detection and fire alarm system shall be installed in:

- .1 periodically unattended machinery spaces; and
- .2 machinery spaces where:
 - .2.1 the installation of automatic and remote control systems and equipment has been approved in lieu of continuous manning of the space; and
 - .2.2 the main propulsion and associated machinery including sources of the main sources of electrical power are provided with various degrees of automatic or remote control and are under continuous manned supervision from a control room.

4.2 Design

The fixed fire detection and fire alarm system required in paragraph 4.1.1 shall be so designed and the detectors so positioned as to detect rapidly the onset of fire in any part of those spaces and under any normal conditions of operation of the machinery and variations of ventilation as required by the possible range of ambient temperatures. Except in spaces of restricted height and where their use is specially appropriate, detection systems using only thermal detectors shall not be permitted. The detection system shall initiate audible and visual alarms distinct in both respects from the alarms of any other system not indicating fire, in sufficient places to ensure that the alarms are heard and observed on the navigating bridge and by a responsible engineer officer. When the navigating bridge is unmanned the alarm shall sound in a place where a responsible member of the crew is on duty.

5 Protection of accommodation and service spaces and control stations

5.1 Smoke detectors in accommodation spaces

Smoke detectors shall be installed in all stairways, corridors and escape routes within accommodation spaces as provided in paragraphs 5.2, 5.3 and 5.4. Consideration shall be given to the installation of special purpose smoke detectors within ventilation ducting.

5.2 Requirements for passenger ships carrying more than 36 passengers

A fixed fire detection and fire alarm system shall be installed and arranged as to provide smoke detection in service spaces, control stations and accommodation spaces, including corridors, stairways and escape routes within accommodation spaces. Smoke detectors need not

be fitted in private bathrooms and galleys. Spaces having little or no fire risk such as voids, public toilets, carbon dioxide rooms and similar spaces need not be fitted with a fixed fire detection and alarm system.

5.3 Requirements for passenger ships carrying not more than 36 passengers

There shall be installed throughout each separate zone, whether vertical or horizontal, in all accommodation and service spaces and, where it is considered necessary by the Administration, in control stations, except spaces which afford no substantial fire risk such as void spaces, sanitary spaces, etc., either:

- .1 a fixed fire detection and fire alarm system so installed and arranged as to detect the presence of fire in such spaces and providing smoke detection in corridors, stairways and escape routes within accommodation spaces; or
- .2 an automatic sprinkler, fire detection and fire alarm system of an approved type complying with the relevant requirements of the Fire Safety Systems Code and so installed and arranged as to protect such spaces and, in addition, a fixed fire detection and fire alarm system and so installed and arranged as to provide smoke detection in corridors, stairways and escape routes within accommodation spaces.

5.4 Protection of atriums in passenger ships

The entire main vertical zone containing the atrium shall be protected throughout with a smoke detection system.

5.5 Cargo ships

Accommodation and service spaces and control stations of cargo ships shall be protected by a fixed fire detection and fire alarm system and/or an automatic sprinkler, fire detection and fire alarm system as follows depending on a protection method adopted in accordance with Regulation 9.2.3.1.

5.5.1 Method IC

A fixed fire detection and fire alarm system shall be so installed and arranged as to provide smoke detection in all corridors, stairways and escape routes within accommodation spaces.

5.5.2 Method IIC

An automatic sprinkler, fire detection and fire alarm system of an approved type complying with the relevant requirements of the Fire Safety Systems Code shall be so installed and arranged as to protect accommodation spaces, galleys and other service spaces, except spaces which afford no substantial fire risk such as void spaces, sanitary spaces, etc. In addition, a fixed fire detection and fire alarm system shall be so installed and arranged as to provide smoke detection in all corridors, stairways and escape routes within accommodation spaces.

5.5.3 Method IIIC

A fixed fire detection and fire alarm system shall be so installed and arranged as to detect the presence of fire in all accommodation spaces and service spaces providing smoke detection in corridors, stairways and

escape routes within accommodation spaces, except spaces which afford no substantial fire risk such as void spaces, sanitary spaces, etc. In addition, a fixed fire detection and fire alarm system shall be so installed and arranged as to provide smoke detection in all corridors, stairways and escape routes within accommodation spaces.

6 Protection of cargo spaces in passenger ships

A fixed fire detection and fire alarm system or a sample extraction smoke detection system shall be provided in any cargo space which, in the opinion of the Administration, is not accessible, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement.

7 Manually operated call points

Manually operated call points complying with the Fire Safety Systems Code shall be installed throughout the accommodation spaces, service spaces and control stations. One manually operated call point shall be located at each exit. Manually operated call points shall be readily accessible in the corridors of each deck such that no part of the corridor is more than 20 m from a manually operated call point.

8 Fire patrols in passenger ships

8.1 Fire patrols

For ships carrying more than 36 passengers an efficient patrol system shall be maintained so that an outbreak of fire may be promptly detected. Each member of the fire patrol shall be trained to be familiar with the arrangements of the ship as well as the location and operation of any equipment he may be called upon to use.

8.2 Inspection hatches

The construction of ceiling and bulkheads shall be such that it will be possible, without impairing the efficiency of the fire protection, for the fire patrols to detect any smoke originating in concealed and inaccessible places, except where in the opinion of the Administration there is no risk of fire originating in such places.

8.3 Two-way portable radiotelephone apparatus

Each member of the fire patrol shall be provided with a two-way portable radiotelephone apparatus.

9 Fire alarm signalling systems in passenger ships*

9.1 Passenger ships shall at all times when at sea, or in port (except when out of service), be so manned or equipped as to ensure that any initial fire alarm is immediately received by a responsible member of the crew.

* Refer to the Code of Alarms and Indicators adopted by the Organization by resolution A.830(19).

9.2 The control panel of fixed fire detection and fire alarm systems shall be designed on the fail-safe principle (e.g. an open detector circuit shall cause an alarm condition).

9.3 Passenger ships carrying more than 36 passengers shall have the fire detection alarms for the systems required by paragraph 5.2 centralized in a continuously manned central control station. In addition, controls for remote closing of the fire doors and shutting down the ventilation fans shall be centralized in the same location. The ventilation fans shall be capable of reactivation by the crew at the continuously manned control station. The control panels in the central control station shall be capable of indicating open or closed positions of fire doors and closed or off status of the detectors, alarms and fans. The control panel shall be continuously powered and shall have an automatic change-over to standby power supply in case of loss of normal power supply. The control panel shall be powered from the main source of electrical power and the emergency source of electrical power defined by regulation II-1/42 unless other arrangements are permitted by the regulations, as applicable.

9.4 A special alarm, operated from the navigation bridge or fire control station, shall be fitted to summon the crew. This alarm may be part of the ship's general alarm system and shall be capable of being sounded independently of the alarm to the passenger spaces.

Regulation 8

Control of smoke spread

1 Purpose

The purpose of this regulation is to control the spread of smoke in order to minimize the hazards from smoke. For this purpose, means for controlling smoke in atriums, control stations, machinery spaces and concealed spaces shall be provided.

2. Protection of control stations outside machinery spaces

Practicable measures shall be taken for control stations outside machinery spaces in order to ensure that ventilation, visibility and freedom from smoke are maintained so that, in the event of fire, the machinery and equipment contained therein may be supervised and continue to function effectively. Alternative and separate means of air supply shall be provided and air inlets of the two sources of supply shall be so disposed that the risk of both inlets drawing in smoke simultaneously is minimized. At the discretion of the Administration, such requirements need not apply to control stations situated on, and opening on to, an open deck or where local closing arrangements would be equally effective.

3 Release of smoke from machinery spaces

3.1 The provisions of this paragraph shall apply to machinery spaces of category A and, where the Administration considers desirable, to other machinery spaces.

3.2 Suitable arrangements shall be made to permit the release of smoke, in the event of fire, from the space to be protected, subject to the provisions of regulation 9.5.2.1 The normal ventilation systems may be acceptable for this purpose.

3.3 Means of control shall be provided for permitting the release of smoke and such controls shall be located outside the space concerned so that, in the event of fire, they will not be cut off from the space they serve.

3.4 In passenger ships, the controls required by paragraph 3.3 shall be situated at one control position or grouped in as few positions as possible to the satisfaction of the Administration. Such positions shall have a safe access from the open deck.

4 Draught stops

Air spaces enclosed behind ceilings, panelling or linings shall be divided by close-fitting draught stops spaced not more than 14 m apart. In the vertical direction, such enclosed air spaces, including those behind linings of stairways, trunks, etc., shall be closed at each deck.

5 Smoke extraction systems in atriums of passenger ships

Atriums shall be equipped with a smoke extraction system. The smoke extraction system shall be activated by the required smoke detection system and be capable of manual control. The fans shall be sized such that the entire volume within space can be exhausted in 10 min or less.

Regulation 9

Containment of fire

1 Purpose

The purpose of this regulation is to contain a fire in the space of origin. For this purpose, the following functional requirements shall be met:

- .1 the ship shall be subdivided by thermal and structural boundaries; .
- .2 thermal insulation of boundaries shall have due regard to the fire risk of the space and adjacent spaces; and
- .3 the fire integrity of the divisions shall be maintained at openings and penetrations.

2. Thermal and structural boundaries

2.1 Thermal and structural subdivision

Ships of all types shall be subdivided into spaces by thermal and structural divisions having regard to the fire risks of the space.

2.2 Passenger ships

2.2.1 Main vertical zones and horizontal zones

2.2.1.1 In ships carrying more than 36 passengers, the hull, superstructure and deckhouses shall be subdivided into main vertical zones by "A-60" class divisions. Steps and recesses shall be kept to a minimum,

but where they are necessary they shall also be “A-60” class divisions. Where a category (5), (9) or (10) space defined in paragraph 2.2.3.2.2 is on one side or where fuel oil tanks are on both sides of the division the standard may be reduced to “A-0”.

2.2.1.1.2 In ships carrying not more than 36 passengers, the hull, superstructure and deckhouses in way of accommodation and service spaces shall be subdivided into main vertical zones by “A” class divisions. These divisions shall have insulation values in accordance with tables in paragraph 2.2.4.

2.2.1.2 As far as practicable, the bulkheads forming the boundaries of the main vertical zones above the bulkhead deck shall be in line with watertight subdivision bulkheads situated immediately below the bulkhead deck. The length and width of main vertical zones may be extended to a maximum of 48 m in order to bring the ends of main vertical zones to coincide with watertight subdivision bulkheads or in order to accommodate a large public space extending for the whole length of the main vertical zone provided that the total area of the main vertical zone is not greater than 1,600 m² on any deck. The length or width of a main vertical zone is the maximum distance between the furthest points of the bulkheads bounding it.

2.2.1.3 Such bulkheads shall extend from deck to deck and to the shell or other boundaries.

2.2.1.4 Where a main vertical zone is subdivided by horizontal “A” class divisions into horizontal zones for the purpose of providing an appropriate barrier between a zone with sprinklers and a zone without sprinklers, the divisions shall extend between adjacent main vertical zone bulkheads and to the shell or exterior boundaries of the ship and shall be insulated in accordance with the fire insulation and integrity values given in table 9.4.

2.2.1.5.1 On ships designed for special purposes, such as automobile or railroad car ferries, where the provision of main vertical zone bulkheads would defeat the purpose for which the ship is intended, equivalent means for controlling and limiting a fire shall be substituted and specifically approved by the Administration. Service spaces and ship stores shall not be located on ro-ro decks unless protected in accordance with the applicable regulations.

2.2.1.5.2 However, in a ship with special category spaces, such spaces shall comply with the applicable provisions of regulation 20 and where such compliance would be inconsistent with other requirements for passenger ships specified in this chapter, the requirements of regulation 20 shall prevail.

2.2.2 Bulkheads within a main vertical zone

2.2.2.1 For ships carrying more than 36 passengers, bulkheads which are not required to be “A” class divisions shall be at least “B” class or “C” class divisions as prescribed in the tables in paragraph 2.2.3.

2.2.2.2 For ships carrying not more than 36 passengers, bulkheads within accommodation and service spaces which are not required to be "A" class divisions shall be at least "B" class or "C" class divisions as prescribed in the tables in paragraph 2.2.4. In addition, corridor bulkheads, where not required to be "A" class, shall be "B" class divisions which shall extend from deck to deck except:

- .1 when continuous "B" class ceilings or linings are fitted on both sides of the bulkhead, the portion of the bulkhead behind the continuous ceiling or lining shall be of material which, in thickness and composition, is acceptable in the construction of "B" class divisions, but which shall be required to meet "B" class integrity standards only in so far as is reasonable and practicable in the opinion of the Administration; and
- .2 in the case of a ship protected by an automatic sprinkler system complying with the provisions of the Fire Safety Systems Code, the corridor bulkheads may terminate at a ceiling in the corridor provided such bulkheads and ceilings are of "B" class standard in compliance with paragraph 2.2.4. All doors and frames in such bulkheads shall be of non-combustible materials and shall have the same fire integrity as the bulkhead in which they are fitted.

2.2.2.3 Bulkheads required to be "B" class divisions, except corridor bulkheads as prescribed in paragraph 2.2.2.2, shall extend from deck to deck and to the shell or other boundaries. However, where a continuous "B" class ceiling or lining is fitted on both sides of a bulkhead which is at least of the same fire resistance as the adjoining bulkhead, the bulkhead may terminate at the continuous ceiling or lining.

2.2.3 Fire integrity of bulkheads and decks in ships carrying more than 36 passengers

2.2.3.1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks of passenger ships, the minimum fire integrity of all bulkheads and decks shall be as prescribed in tables 9.1 and 9.2. Where, due to any particular structural arrangements in the ship, difficulty is experienced in determining from the tables the minimum fire integrity value of any divisions, such values shall be determined to the satisfaction of the Administration.

2.2.3.2 The following requirements shall govern application of the tables:

- .1 Table 9.1 shall apply to bulkheads not bounding either main vertical zones or horizontal zones. Table 9.2 shall apply to decks not forming steps in main vertical zones nor bounding horizontal zones;
- .2 For determining the appropriate fire integrity standards to be applied to boundaries between adjacent spaces, such spaces are classified according to their fire risk as shown in categories (1) to (14) below. Where the contents and use of a space are such that there is a doubt as to its classification for the purpose of

this regulation, or where it is possible to assign two or more classifications to a space, it shall be treated as a space within the relevant category having the most stringent boundary requirements. Smaller, enclosed rooms within a space that have less than 30% communicating openings to that space are considered separate spaces. The fire integrity of the boundary bulkheads and decks of such smaller rooms shall be as prescribed in tables 9.1 and 9.2. The title of each category is intended to be typical rather than restrictive. The number in parentheses preceding each category refers to the applicable column or row in the tables.

- (1) Control stations
 - Spaces containing emergency sources of power and lighting. Wheelhouse and chartroom.
 - Spaces containing the ship's radio equipment.
 - Fire control stations
 - Control room for propulsion machinery when located outside the propulsion machinery space.
 - Spaces containing centralized fire alarm equipment.
 - Spaces containing centralized emergency public address system stations and equipment.
- (2) Stairways
 - Interior stairways, lifts, totally enclosed emergency escape trunks, and escalators (other than those wholly contained within the machinery spaces) for passengers and crew and enclosures thereto.
 - In this connection a stairway which is enclosed at only one level shall be regarded as part of the space from which it is not separated by a fire door.
- (3) Corridors
 - Passenger and crew corridors and lobbies.
- (4) Evacuation stations and external escape routes
 - Survival craft stowage area.
 - Open deck spaces and enclosed promenades forming lifeboat and liferaft embarkation and lowering stations.
 - Assembly stations, internal and external.
 - External stairs and open decks used for escape routes.
 - The ship's side to the waterline in the lightest seagoing condition, superstructure and deckhouse sides situated below and adjacent to the liferaft and evacuation slide embarkation areas.
- (5) Open deck spaces
 - Open deck spaces and enclosed promenades clear of lifeboat and liferaft embarkation and lowering stations. To be considered in this category, enclosed promenades shall have no significant fire risk, meaning that furnishings shall be restricted to deck furniture. In addition, such spaces shall be naturally ventilated by permanent openings.

- Air spaces (the space outside superstructures and deckhouses).
- (6) Accommodation spaces of minor fire risk
Cabins containing furniture and furnishings of restricted fire risk.
Offices and dispensaries containing furniture and furnishings of restricted fire risk.
Public spaces containing furniture and furnishings of restricted fire risk and having a deck area of less than 50 m².
- (7) Accommodation spaces of moderate fire risk
Spaces as in category (6) above but containing furniture and furnishings of other than restricted fire risk.
Public spaces containing furniture and furnishings of restricted fire risk and having a deck area of 50 m² or more.
Isolated lockers and small store-rooms in accommodation spaces having areas less than 4 m² (in which flammable liquids are not stowed).
Sale shops. Motion picture projection and film stowage rooms.
Diet kitchens (containing no open flame).
Cleaning gear lockers (in which flammable liquids are not stowed).
Laboratories (in which flammable liquids are not stowed).
Pharmacies.
Small drying rooms (having a deck area of 4 m² or less).
Specie rooms.
Operating rooms.
- (8) Accommodation spaces of greater fire risk
Public spaces containing furniture and furnishings of other than restricted fire risk and having a deck area of 50 m² or more.
Barber shops and beauty parlours.
Saunas.
- (9) Sanitary and similar spaces
Communal sanitary facilities, showers, baths, water closets, etc.
Small laundry rooms.
Indoor swimming pool area.
Isolated pantries containing no cooking appliances in accommodation spaces.
Private sanitary facilities shall be considered a portion of the space in which they are located.
- (10) Tanks, voids and auxiliary machinery spaces having little or no fire risk
Water tanks forming part of the ship's structure.
Voids and cofferdams.
Auxiliary machinery spaces which do not contain machinery having a pressure lubrication system and where storage of

combustibles is prohibited, such as:
 ventilation and air-conditioning rooms;
 windlass room;
 steering gear room;
 stabilizer equipment room;
 electrical propulsion motor room;
 rooms containing section switchboards and purely electrical equipment other than oil-filled electrical transformers (above 10 kVA);
 shaft alleys and pipe tunnels;
 spaces for pumps and refrigeration machinery (not handling or using flammable liquids).

Closed trunks serving the spaces listed above.

Other closed trunks such as pipe and cable trunks.

- (11) Auxiliary machinery spaces, cargo spaces, cargo and other oil tanks and other similar spaces of moderate fire risk

Cargo oil tanks.

Cargo holds, trunkways and hatchways.

Refrigerated chambers.

Oil fuel tanks (where installed in a separate space with no machinery).

Shaft alleys and pipe tunnels allowing storage of combustibles.

Auxiliary machinery spaces as in category (10) which contain machinery having a pressure lubrication system or where storage of combustibles is permitted.

Oil fuel filling stations.

Spaces containing oil-filled electrical transformers (above 10 kVA).

Spaces containing turbine and reciprocating steam engine driven auxiliary generators and small internal combustion engines of power output up to 110 kW driving generators, sprinkler, drencher or fire pumps, bilge pumps, etc.

Closed trunks serving the spaces listed above.

- (12) Machinery spaces and main galleys

Main propulsion machinery rooms (other than electric propulsion motor rooms) and boiler rooms.

Auxiliary machinery spaces other than those in categories (10) and (11) which contain internal combustion machinery or other oil-burning, heating or pumping units.

Main galleys and annexes.

Trunks and casings to the spaces listed above.

- (13) Store-rooms, workshops, pantries, etc.

Main pantries not annexed to galleys.

Main laundry.

Large drying rooms (having a deck area of more than 4 m²)

- Miscellaneous stores.
- Mail and baggage rooms.
- Garbage rooms.
- Workshops (not part of machinery spaces, galleys, etc.).
- Lockers and store-rooms having areas greater than 4 m², other than those spaces that have provisions for the storage of flammable liquids.
- (14) Other spaces in which flammable liquids are stowed
 - Paint lockers.
 - Store-rooms containing flammable liquids (including dyes, medicines, etc.).
 - Laboratories (in which flammable liquids are stowed);
- .3 Where a single value is shown for the fire integrity of a boundary between two spaces, that value shall apply in all cases;
- .4 Notwithstanding the provisions of paragraph 2.2.2 there are no special requirements for material or integrity of boundaries where only a dash appears in the tables; and
- .5 The Administration shall determine in respect of category (5) spaces whether the insulation values in table 9.1 shall apply to ends of deckhouses and superstructures, and whether the insulation values in table 9.2 shall apply to weather decks. In no case shall the requirements of category (5) of tables 9.1 or 9.2 necessitate enclosure of spaces which in the opinion of the Administration need not be enclosed.

Table 9.1 – Bulkheads not bounding either main vertical zones or horizontal zones

Spaces	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Control stations	(1)	A-0	A-0	A-0	A-0	A-60	A-60	A-60	A-0	A-0	A-60	A-60	A-60	A-60
Stairways	(2)	A-0 ^a	A-0	A-0	A-0	A-0	A-15	A-15	A-0 ^e	A-0	A-15	A-30	A-15	A-30
Corridors	(3)		B-15	A-60	A-0	B-15	B-15	B-15	B-15	A-0	A-15	A-30	A-0	A-30
Evacuation stations and external escape routes	(4)				A-0	A-60 ^{b,d}	A-60 ^{b,d}	A-60 ^{b,d}	A-0 ^d	A-0	A-60 ^b	A-60 ^b	A-60 ^b	A-60 ^b
Open deck spaces	(5)					A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0
Accommodation spaces of minor fire risk	(6)					B-0	B-0	B-0	C	A-0	A-0	A-30	A-0	A-30
Accommodation spaces of moderate fire risk	(7)							B-0	C	A-0	A-15	A-60	A-15	A-60
Accommodation spaces of greater fire risk	(8)								C	A-0	A-30	A-60	A-15	A-60
Sanitary and similar spaces	(9)								C	A-0	A-0	A-0	A-0	A-0
Tanks, voids and auxiliary machinery spaces having little or no fire risk	(10)									A-0 ^a	A-0	A-0	A-0	A-0
Auxiliary machinery spaces, cargo spaces, cargo and other oil tanks and other similar spaces of moderate fire risk	(11)										A-0 ^a	A-0	A-0	A-15

Space below ↓	Space above →	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Tanks, voids and auxiliary machinery spaces having little or no fire risk	(10) A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0a	A-0	A-0	A-0	A-0
Auxiliary machinery spaces, cargo spaces, cargo and other oil tanks and other similar spaces of moderate fire risk	(11) A-60	A-60	A-60	A-60	A-60	A-0	A-15	A-30	A-0	A-0	A-0	A-0 ^b	A-0	A-0	A-30
Machinery spaces and main galleys	(12) A-60	A-60	A-60	A-60	A-60	A-0	A-60	A-60	A-60	A-0	A-0	A-30	A-30 ^a	A-0	A-60
Store-rooms, workshops, pantries, etc.	(13) A-60	A-30	A-15	A-60	A-60	A-0	A-15	A-30	A-30	A-0	A-0	A-0	A-0	A-0	A-0
Other spaces in which flammable liquids are stowed	(14) A-60	A-60	A-60	A-60	A-60	A-0	A-30	A-60	A-60	A-0	A-0	A-0	A-0	A-0	A-0

Note: To be applied to tables 9.1 and 9.2.

^a Where adjacent spaces are in the same numerical category and superscript “a” appears, a bulkhead or deck between such spaces need not be fitted if deemed unnecessary by the Administration. For example, in category (12) a bulkhead need not be required between a galley and its annexed pantries provided the pantry bulkhead and decks maintain the integrity of the galley boundaries. A bulkhead is, however, required between a galley and machinery space even though both spaces are in category (12).

^b The ship’s side, to the waterline in the lightest seagoing condition, superstructure and deckhouse sides situated below and adjacent to liferafts and evacuation slides may be reduced to “A-30”.

^c Where public toilets are installed completely within the stairway enclosure, the public toilet bulkhead within the stairway enclosure can be of “B” class integrity.

^d Where spaces of categories (6), (7), (8) and (9) are located completely within the outer perimeter of the assembly station, the bulkheads of these spaces are allowed to be of “B-0” class integrity. Control positions for audio, video and light installations may be considered as part of the assembly station.

2.2.3.3 Continuous “B” class ceilings or linings, in association with the relevant decks or bulkheads, may be accepted as contributing wholly or in part, to the required insulation and integrity of a division.

2.2.3.4 Construction and arrangement of saunas

2.2.3.4.1 The perimeter of the sauna shall be of “A” class boundaries and may include changing rooms, showers and toilets. The sauna shall be insulated to A-60 standard against other spaces except those inside of the perimeter and spaces of categories (5), (9) and (10).

2.2.3.4.2 Bathrooms with direct access to saunas may be considered as part of them. In such cases, the door between sauna and the bathroom need not comply with fire safety requirements.

2.2.3.4.3 The traditional wooden lining on the bulkheads and ceiling are permitted in the sauna. The ceiling above the oven shall be lined with a non-combustible plate with an air gap of at least 30 mm. The distance from the hot surfaces to combustible materials shall be at least 500 mm or the combustible materials shall be protected (e.g. non-combustible plate with an air gap of at least 30 mm).

2.2.3.4.4 The traditional wooden benches are permitted to be used in the sauna.

2.2.3.4.5 The sauna door shall open outwards by pushing.

2.2.3.4.6 Electrically heated ovens shall be provided with a timer.

2.2.4 Fire integrity of bulkheads and decks in ships carrying not more than 36 passengers

2.2.4.1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks of passenger ships, the minimum fire integrity of bulkheads and decks shall be as prescribed in tables 9.3 and 9.4.

2.2.4.2 The following requirements govern application of the tables:

- .1 Tables 9.3 and 9.4 shall apply respectively to the bulkheads and decks separating adjacent spaces;
- .2 For determining the appropriate fire integrity standards to be applied to divisions between adjacent spaces, such spaces are classified according to their fire risk as shown in categories (1) to (11) below. Where the contents and use of a space are such that there is a doubt as to its classification for the purpose of this regulation, or where it is possible to assign two or more classifications to a space, it shall be treated as a space within the relevant category having the most stringent boundary requirements. Smaller, enclosed rooms within a space that have less than 30 % communicating openings to that space are considered separate spaces. The fire integrity of the boundary bulkheads and decks of such smaller rooms shall be as prescribed in tables 9.3 and 9.4. The title of each category is intended to be typical rather than restrictive. The number in parentheses preceding each category refers to the applicable column or row in the tables.

- (1) Control stations

- Spaces containing emergency sources of power and lighting.
 Wheelhouse and chartroom.
 Spaces containing the ship's radio equipment.
 Fire control stations.
 Control room for propulsion machinery when located outside the machinery space.
 Spaces containing centralized fire alarm equipment.
- (2) Corridors
 Passenger and crew corridors and lobbies.
 - (3) Accommodation spaces
 Spaces as defined in regulation 3.1 excluding corridors.
 - (4) Stairways
 Interior stairways, lifts, totally enclosed emergency escape trunks, and escalators (other than those wholly contained within the machinery spaces) and enclosures thereto.
 In this connection, a stairway which is enclosed only at one level shall be regarded as part of the space from which it is not separated by a fire door.
 - (5) Service spaces (low risk)
 Lockers and store-rooms not having provisions for the storage of flammable liquids and having areas less than 4 m² and drying rooms and laundries.
 - (6) Machinery spaces of category A
 Spaces as defined in regulation 3.31.
 - (7) Other machinery spaces
 Electrical equipment rooms (auto-telephone exchange, air-conditioning duct spaces).
 Spaces as defined in regulation 3.30 excluding machinery spaces of category A.
 - (8) Cargo spaces
 All spaces used for cargo (including cargo oil tanks) and trunkways and hatchways to such spaces, other than special category spaces.
 - (9) Service spaces (high risk)
 Galleys, pantries containing cooking appliances, paint and lamp rooms, lockers and store-rooms having areas of 4 m² or more, spaces for the storage of flammable liquids, saunas and workshops other than those forming part of the machinery spaces.
 - (10) Open decks
 Open deck spaces and enclosed promenades having little or no fire risk. To be considered in this category, enclosed promenades should have no significant fire risk, meaning that furnishing should be restricted to deck furniture. In addition, such spaces should be naturally ventilated by permanent openings. Air spaces (the space outside superstructures and deckhouses).

(11) Special category and ro-ro spaces

Spaces as defined in regulations 3.41 and 3.46;

- .3 In determining the applicable fire integrity standard of a boundary between two spaces within a main vertical zone or horizontal zone which is not protected by an automatic sprinkler system complying with the provisions of the Fire Safety Systems Code or between such zones neither of which is so protected, the higher of the two values given in the tables shall apply;
- .4 In determining the applicable fire integrity standard of a boundary between two spaces within a main vertical zone or horizontal zone which is protected by an automatic sprinkler system complying with the provisions of the Fire Safety Systems Code or between such zones both of which are so protected, the lesser of the two values given in the tables shall apply. Where a zone with sprinklers and a zone without sprinklers meet within accommodation and service spaces, the higher of the two values given in the tables shall apply to the division between the zones.

2.2.4.3 Continuous “B” class ceilings or linings, in association with the relevant decks or bulkheads, may be accepted as contributing, wholly or in part, to the required insulation and integrity of a division.

2.2.4.4 External boundaries which are required in regulation 11.2 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries of passenger ships to have “A” class integrity. Similarly, in such boundaries which are not required to have “A” class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.

2.2.4.5 Saunas shall comply with paragraph 2.2.3.4.

Table 9.3 – Fire integrity of bulkheads separating adjacent spaces

Spaces	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Control stations	(1) A-0 ^c	A-0	A-60	A-0	A-15	A-60	A-15	A-60	A-60	*	A-60
Corridors	(2)	C ^c	B-0 ^e	A-0 ^a B-0 ^e	B-0 ^e	A-60	A-0	A-0	A-15 A-0 ^d	*	A-15
Accommodation spaces	(3)		Ce	A-0 ^a B-0 ^e	B-0 ^e	A-60	A-0	A-0	A-15 A-0 ^d	*	A-30 A-0 ^d
Stairways	(4)			A-0 ^a B-0 ^e	A-0 ^a B-0 ^e	A-60	A-0	A-0	A-15 A-0 ^d	*	A-15
Service spaces (low risk)	(5)				Ce	A-60	A-0	A-0	A-0	*	A-0
Machinery spaces of category A	(6)					*	A-0	A-0	A-60	*	A-60

Spaces	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Other machinery spaces (7)							A-0 ^b	A-0	A-0	*	A-0
Cargo spaces (8)								*	A-0	*	A-0
Service spaces (high risk) (9)									A-0 ^b	*	A-30
Open decks (10)											
Special category and ro-ro spaces (11)											A-0

Table 9.4 – Fire integrity of decks separating adjacent spaces

Space below ↓	Space above →	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Control stations (1)	A-0	A-0	A-0	A-0	A-0	A-0	A-60	A-0	A-0	A-0	*	A-30
Corridors (2)	A-0	*	*	A-0	*	A-60	A-0	A-0	A-0	A-0	*	A-0
Accommodation spaces (3)	A-60	A-0	*	A-0	*	A-60	A-0	A-0	A-0	A-0	*	A-30 A-0 ^d
Stairways (4)	A-0	A-0	A-0	*	A-0	A-60	A-0	A-0	A-0	A-0	*	A-0
Service spaces (low risk) (5)	A-15	A-0	A-0	A-0	*	A-60	A-0	A-0	A-0	A-0	*	A-0
Machinery spaces of category A (6)	A-60	A-60	A-60	A-60	A-60	*	A-60 ^f	A-30	A-60	*	*	A-60
Other machinery spaces (7)	A-15	A-0	A-0	A-0	A-0	A-0	*	A-0	A-0	A-0	*	A-0
Cargo spaces (8)	A-60	A-0	A-0	A-0	A-0	A-0	A-0	*	A-0	*	*	A-0
Service spaces (high risk) (9)	A-60	A-30 A-0 ^d	A-30 A-0 ^d	A-30 A-0 ^d	A-0	A-60	A-0	A-0	A-0	A-0	*	A-30
Open decks (10)	*	*	*	*	*	*	*	*	*	*	-	A-0
Special category and ro-ro spaces (11)	A-60	A-15	A-30 A-0 ^d	A-15	A-0	A-30	A-0	A-0	A-0	A-30	A-0	A-0

Notes: To be applied to both tables 9.3 and 9.4 as appropriate.

^a For clarification as to which applies, see paragraphs 2.2.2 and 2.2.5.

^b Where spaces are of the same numerical category and superscript b appears, a bulkhead or deck of the rating shown in the tables is only required when the adjacent spaces are for a different purpose, (e.g. in category (9)). A galley next to a galley does not require a bulkhead but a galley next to a paint room requires an “A-0” bulkhead.

^c Bulkhead separating the wheelhouse and chartroom from each other may have a "B-0" rating.

^d See paragraphs 2.2.4.2.3 and 2.2.4.2.4.

^e For the application of paragraph 2.2.1.1.2, "B-0" and "C", where appearing in table 9.3, shall be read as "A-0".

^f Fire insulation need not be fitted if the machinery space in category (7), in the opinion of the Administration, has little or no fire risk.

* Where an asterisk appears in the tables, the division is required to be of steel or other equivalent material, but is not required to be of "A" class standard. However, where a deck, except in a category (10) space, is penetrated for the passage of electric cables, pipes and vent ducts, such penetrations should be made tight to prevent the passage of flame and smoke. Divisions between control stations (emergency generators) and open decks may have air intake openings without means for closure, unless a fixed gas fire-fighting system is fitted.

For the application of paragraph 2.2.1.1.2, an asterisk, where appearing in table 9.4, except for categories (8) and (10), shall be read as "A-0".

2.2.5 Protection of stairways and lifts in accommodation area

2.2.5.1 Stairways shall be within enclosures formed of "A" class divisions, with positive means of closure at all openings, except that:

- .1 a stairway connecting only two decks need not be enclosed, provided the integrity of the deck is maintained by proper bulkheads or self-closing doors in one 'tween-deck space. When a stairway is closed in one 'tween-deck space, the stairway enclosure shall be protected in accordance with the tables for decks in paragraphs 2.2.3 or 2.2.4; and
- .2 stairways may be fitted in the open in a public space, provided they lie wholly within the public space.

2.2.5.2 Lift trunks shall be so fitted as to prevent the passage of smoke and flame from one 'tween-deck to another and shall be provided with means of closing so as to permit the control of draught and smoke. Machinery for lifts located within stairway enclosures shall be arranged in a separate room, surrounded by steel boundaries, except that small passages for lift cables are permitted. Lifts which open into spaces other than corridors, public spaces, special category spaces, stairways and external areas shall not open into stairways included in the means of escape.

2.3 Cargo ships except tankers

2.3.1 Methods of protection in accommodation area

2.3.1.1 One of the following methods of protection shall be adopted in accommodation and service spaces and control stations:

.1 Method IC

The construction of internal divisional bulkheads of non-combustible "B" or "C" class divisions generally without the installation of an automatic sprinkler, fire detection and fire alarm system in the accommodation and service spaces, except as required by regulation 7.5.5.1; or

.2 Method IIC

The fitting of an automatic sprinkler, fire detection and fire alarm system as required by regulation 7.5.5.2 for the detection and extinction of fire in all spaces in which fire might be expected to originate, generally with no restriction on the type of internal divisional bulkheads; or

.3 Method IIIC

The fitting of a fixed fire detection and fire alarm system as required by Regulation 7.5.5.3, in spaces in which a fire might be expected to originate, generally with no restriction on the type of internal divisional bulkheads, except that in no case must the area of any accommodation space or spaces bounded by an "A" or "B" class division exceed 50 m². Consideration may be given by the Administration to increasing this area for public spaces.

2.3.1.2 The requirements for the use of non-combustible materials in the construction and insulation of boundary bulkheads of machinery spaces, control stations, service spaces, etc., and the protection of the above stairway enclosures and corridors will be common to all three methods outlined in paragraph 2.3.1.1.

2.3.2 Bulkheads within accommodation area

2.3.2.1 Bulkheads required to be "B" class divisions shall extend from deck to deck and to the shell or other boundaries. However, where a continuous "B" class ceiling or lining is fitted on both sides of the bulkhead, the bulkhead may terminate at the continuous ceiling or lining.

2.3.2.2 Method IC

Bulkheads not required by this or other regulations for cargo ships to be "A" or "B" class divisions, shall be of at least "C" class construction.

2.3.2.3 Method IIC

There shall be no restriction on the construction of bulkheads not required by this or other Regulations for cargo ships to be "A" or "B" class divisions except in individual cases where "C" class bulkheads are required in accordance with table 9.5.

2.3.2.4 Method IIIC

There shall be no restriction on the construction of bulkheads not required for cargo ships to be "A" or "B" class divisions except that the area of any accommodation space or spaces bounded by a continuous "A" or "B" class division must in no case exceed 50 m², except in individual cases where "C" class bulkheads are required in accordance with table 9.5. Consideration may be given by the Administration to increasing this area for public spaces.

2.3.3 Fire integrity of bulkheads and decks

2.3.3.1 In addition to complying with the specific provisions for fire integrity of bulkheads and decks of cargo ships, the minimum

fire integrity of bulkheads and decks shall be as prescribed in tables 9.5 and 9.6.

2.3.3.2 The following requirements shall govern application of the tables:

- .1 Tables 9.5 and 9.6 shall apply respectively to the bulkheads and decks separating adjacent spaces;
- .2 For determining the appropriate fire integrity standards to be applied to divisions between adjacent spaces, such spaces are classified according to their fire risk as shown in categories (1) to (11) below. Where the contents and use of a space are such that there is a doubt as to its classification for the purpose of this regulation, or where it is possible to assign two or more classifications to a space, it shall be treated as a space within the relevant category having the most stringent boundary requirements. Smaller, enclosed rooms within a space that have less than 30% communicating openings to that space are considered separate spaces. The fire integrity of the boundary bulkheads and decks of such smaller rooms shall be as prescribed in tables 9.5 and 9.6. The title of each category is intended to be typical rather than restrictive. The number in parentheses preceding each category refers to the applicable column or row in the tables;
 - (1) Control stations
 - Spaces containing emergency sources of power and lighting.
 - Wheelhouse and chartroom.
 - Spaces containing the ship's radio equipment.
 - Fire control stations.
 - Control room for propulsion machinery when located outside the machinery space.
 - Spaces containing centralized fire alarm equipment.
 - (2) Corridors
 - corridors and lobbies.
 - (3) Accommodation spaces
 - Spaces as defined in regulation 3.1, excluding corridors.
 - (4) Stairways
 - Interior stairway, lifts, totally enclosed emergency escape trunks, and escalators (other than those wholly contained within the machinery spaces) and enclosures thereto. In this connection, a stairway which is enclosed only at one level shall be regarded as part of the space from which it is not separated by a fire door.
 - (5) Service spaces (low risk)
 - Lockers and store-rooms not having provisions for the storage of flammable liquids and having areas less than 4 m² and drying rooms and laundries.

- (6) Machinery spaces of category A
Spaces as defined in regulation 3.31.
- (7) Other machinery spaces
Electrical equipment rooms (auto-telephone exchange, air-conditioning duct spaces).
Spaces as defined in regulation 3.30 excluding machinery spaces of category A.
- (8) Cargo spaces
All spaces used for cargo (including cargo oil tanks) and trunkways and hatchways to such spaces.
- (9) Service spaces (high risk)
Galley, pantries containing cooking appliances, saunas, paint lockers and store-rooms having areas of 4 m² or more, spaces for the storage of flammable liquids, and workshops other than those forming part of the machinery spaces.
- (10) Open decks
Open deck spaces and enclosed promenades having little or no fire risk. To be considered in this category, enclosed promenades shall have no significant fire risk, meaning that furnishings shall be restricted to deck furniture. In addition, such spaces shall be naturally ventilated by permanent openings.
Air spaces (the space outside superstructures and deckhouses).
- (11) Ro-ro and vehicle spaces
Ro-ro spaces as defined in regulation 3.41.
Vehicle spaces as defined in regulation 3.49.

Table 9.5 – Fire integrity of bulkheads separating adjacent spaces

Spaces	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Control stations (1)	A-0 ^e	A-0	A-60	A-0	A-15	A-60	A-15	A-60	A-60	*	A-60
Corridors (2)		C	B-0	B-0 A-0 ^c	B-0	A-60	A-0	A-0	A-0	*	A-30
Accommodation spaces (3)			C ^{a, b}	B-0 A-0 ^c	B-0	A-60	A-0	A-0	A-0	*	A-30
Stairways (4)				B-0 A-0 ^c	B-0 A-0 ^c	A-60	A-0	A-0	A-0	*	A-30
Service spaces (low risk) (5)					C	A-60	A-0	A-0	A-0	*	A-0
Machinery spaces of category A (6)						*	A-0	A-0 ^g	A-60	*	A-60 ^f

Spaces	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Other machinery spaces (7)							A-0 ^d	A-0	A-0	*	A-0
Cargo spaces (8)								*	A-0	*	A-0
Service spaces (high risk) (9)									A-0 ^d	*	A-30
Open decks (10)										-	A-0
Ro-ro and vehicle spaces (11)											* ^h

Table 9.6 – Fire integrity of decks separating adjacent spaces

Space below	Space above	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Control stations (1)	A-0	A-0	A-0	A-0	A-0	A-0	A-60	A-0	A-0	A-0	*	A-60
Corridors (2)	A-0	*	*	A-0	*	A-60	A-0	A-0	A-0	A-0	*	A-30
Accommodation spaces (3)	A-60	A-0	*	A-0	*	A-60	A-0	A-0	A-0	A-0	*	A-30
Stairways (4)	A-0	A-0	A-0	*	A-0	A-60	A-0	A-0	A-0	A-0	*	A-30
Service spaces (low risk) (5)	A-15	A-0	A-0	A-0	*	A-60	A-0	A-0	A-0	A-0	*	A-0
Machinery spaces of category A (6)	A-60	A-60	A-60	A-60	A-60	*	A-60 ⁱ	A-30	A-60	A-60	*	A-60
Other machinery spaces (7)	A-15	A-0	A-0	A-0	A-0	A-0	*	A-0	A-0	A-0	*	A-0
Cargo spaces (8)	A-60	A-0	A-0	A-0	A-0	A-0	A-0	*	A-0	A-0	*	A-0
Service spaces (high risk) (9)	A-60	A-0	A-0	A-0	A-0	A-60	A-0	A-0	A-0	A-0 ^d	*	A-30
Open decks (10)	*	*	*	*	*	*	*	*	*	*	-	*
Ro-ro and vehicle spaces (11)	A-60	A-30	A-30	A-30	A-0	A-60	A-0	A-0	A-0	A-30	*	* ^h

Note: To be applied to tables 9.5 and 9.6 as appropriate.

^a No special requirements are imposed upon bulkheads in methods IIC and IIC fire protection.

^b In case of method IIC “B” class bulkheads of “B-0” rating shall be provided between spaces or groups of spaces of 50 m² and over in area.

^c For clarification as to which applies, see paragraphs 2.3.2 and 2.3.4.

^d Where spaces are of the same numerical category and superscript d appear, a bulkhead or deck of the rating shown in the tables is only required when the

adjacent spaces are for a different purpose (e.g. in category (9)). A galley next to a galley does not require a bulkhead but a galley next to a paint room requires an "A-0" bulkhead.

^e Bulkheads separating the wheelhouse, chartroom and radio room from each other may have a "B-0" rating.

^f An "A-0" rating may be used if no dangerous goods are intended to be carried or if such goods are stowed not less than 3 m horizontally from such a bulkhead.

^g For cargo spaces in which dangerous goods are intended to be carried, regulation 19.3.8 applies.

^h Bulkheads and decks separating ro-ro spaces shall be capable of being closed reasonably gastight and such divisions shall have "A" class integrity in so far as reasonable and practicable, if in the opinion of the Administration it has little or no fire risk.

ⁱ Fire insulation need not be fitted if the machinery in category (7) if, in the opinion of the Administration, it has little or no fire risk. * Where an asterisk appears in the tables, the division is required to be of steel or other equivalent material but is not required to be of "A" class standard. However, where a deck, except an open deck, is penetrated for the passage of electric cables, pipes and vent ducts, such penetrations should be made tight to prevent the passage of flame and smoke. Divisions between control stations (emergency generators) and open decks may have air intake openings without means for closure, unless a fixed gas fire-fighting system is fitted.

2.3.3.3 Continuous "B" class ceilings or linings, in association with the relevant decks or bulkheads, may be accepted as contributing, wholly or in part, to the required insulation and integrity of a division.

2.3.3.4 External boundaries which are required in regulation 11.2 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries of cargo ships to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.

2.3.3.5 Saunas shall comply with paragraph 2.2.3.4.

2.3.4 Protection of stairways and lift trunks in accommodation spaces, service spaces and control stations

2.3.4.1 Stairways which penetrate only a single deck shall be protected, at a minimum, at one level by at least "B-0" class divisions and self-closing doors. Lifts which penetrate only a single deck shall be surrounded by "A-0" class divisions with steel doors at both levels. Stairways and lift trunks which penetrate more than a single deck shall be surrounded by at least "A-0" class divisions and be protected by self-closing doors at all levels.

2.3.4.2 On ships having accommodation for 12 persons or less, where stairways penetrate more than a single deck and where there are at least two escape routes direct to the open deck at every accommodation level, the "A-0" requirements of paragraph 2.3.4.1 may be reduced to "B-0".

2.4 Tankers

2.4.1 Application

For tankers, only method IC as defined in paragraph 2.3.1.1 shall be used.

2.4.2 Fire integrity of bulkheads and decks

2.4.2.1 In lieu of paragraph 2.3 and in addition to complying with the specific provisions for fire integrity of bulkheads and decks of tankers, the minimum fire integrity of bulkheads and decks shall be as prescribed in tables 9.7 and 9.8.

2.4.2.2 The following requirements shall govern application of the tables:

- .1 Tables 9.7 and 9.8 shall apply respectively to the bulkhead and decks separating adjacent spaces;
- .2 For determining the appropriate fire integrity standards to be applied to divisions between adjacent spaces, such spaces are classified according to their fire risk as shown in categories (1) to (10) below. Where the contents and use of a space are such that there is a doubt as to its classification for the purpose of this regulation, or where it is possible to assign two or more classifications to a space, it shall be treated as a space within the relevant category having the most stringent boundary requirements. Smaller, enclosed areas within a space that have less than 30% communicating openings to that space are considered separate areas. The fire integrity of the boundary bulkheads and decks of such smaller spaces shall be as prescribed in tables 9.7 and 9.8. The title of each category is intended to be typical rather than restrictive. The number in parentheses preceding each category refers to the applicable column or row in the tables;
 - (1) Control stations
 - Spaces containing emergency sources of power and lighting.
 - Wheelhouse and chartroom.
 - Spaces containing the ship's radio equipment.
 - Fire control stations.
 - Control room for propulsion machinery when located outside the machinery space.
 - Spaces containing centralized fire alarm equipment.
 - (2) Corridors
 - Corridors and lobbies.
 - (3) Accommodation spaces
 - Spaces as defined in regulation 3.1, excluding corridors.
 - (4) Stairways
 - Interior stairways, lifts, totally enclosed emergency escape trunks, and escalators (other than those wholly contained within the machinery spaces) and enclosures thereto.
 - In this connection, a stairway which is enclosed only at one level shall be regarded as part of the space from which it is not separated by a fire door.

- (5) Service spaces (low risk)
Lockers and store-rooms not having provisions for the storage of flammable liquids and having areas less than 4 m² and drying rooms and laundries.
- (6) Machinery spaces of category A
Spaces as defined in regulation 3.31.
- (7) Other machinery spaces
Electrical equipment rooms (auto-telephone exchange and air-conditioning duct spaces).
Spaces as defined in regulation 3.30 excluding machinery spaces of category A.
- (8) Cargo pump-rooms
Spaces containing cargo pumps and entrances and trunks to such spaces.
- (9) Service spaces (high risk)
Galleys, pantries containing cooking appliances, saunas, paint lockers and store-rooms having areas of 4 m² or more, spaces for the storage of flammable liquids and workshops other than those forming part of the machinery spaces.
- (10) Open decks
Open deck spaces and enclosed promenades having little or no fire risk. To be considered in this category, enclosed promenades shall have no significant fire risk, meaning that furnishings shall be restricted to deck furniture. In addition, such spaces shall be naturally ventilated by permanent openings.
Air spaces (the space outside superstructures and deckhouses).

2.4.2.3 Continuous "B" class ceilings or linings, in association with the relevant decks or bulkheads, may be accepted as contributing, wholly or in part, to the required insulation and integrity of a division.

2.4.2.4 External boundaries which are required in regulation 11.2 to be of steel or other equivalent material may be pierced for the fitting of windows and sidescuttles provided that there is no requirement for such boundaries of tankers to have "A" class integrity. Similarly, in such boundaries which are not required to have "A" class integrity, doors may be constructed of materials which are to the satisfaction of the Administration.

2.4.2.5 Exterior boundaries of superstructures and deckhouses enclosing accommodation and including any overhanging decks which support such accommodation, shall be constructed of steel and insulated to "A-60" standard for the whole of the portions which face the cargo area and on the outward sides for a distance of 3 m from the end boundary facing the cargo area. The distance of 3 m shall be measured horizontally and parallel to the middle line of the ship from the boundary

which faces the cargo area at each deck level. In the case of the sides of those superstructures and deckhouses, such insulation shall be carried up to the underside of the deck of the navigation bridge.

2.4.2.6 Skylights to cargo pump-rooms shall be of steel, shall not contain any glass and shall be capable of being closed from outside the pump-room.

2.4.2.7 Construction and arrangement of saunas shall comply with paragraph 2.2.3.4.

Table 9.7 – Fire integrity of bulkheads separating adjacent spaces

Spaces	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Control stations	(1) A-0 ^c	A-0	A-60	A-0	A-15	A-60	A-15	A-60	A-60	*
Corridors	(2)	C	B-0	B-0 A-0 ^a	B-0	A-60	A-0	A-60	A-0	*
Accommodation spaces	(3)		C	B-0 A-0 ^a	B-0	A-60	A-0	A-60	A-0	*
Stairways	(4)			B-0 A-0 ^a	B-0 A-0 ^a	A-60	A-0	A-60	A-0	*
Service spaces (low risk)	(5)				C	A-60	A-0	A-60	A-0	*
Machinery spaces of category A	(6)					*	A-0	A-0 ^d	A-60	*
Other machinery spaces	(7)						A-0 ^b	A-0	A-0	*
Cargo pump-rooms	(8)							*	A-60	*
Service spaces (high risk)	(9)								A-0 ^b	*
Open decks	(10)									-

Table 9.8 – Fire integrity of decks separating adjacent spaces

Space below	Space above	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Control stations	(1)	A-0	A-0	A-0	A-0	A-0	A-60	A-0	-	A-0	*
Corridors	(2)	A-0	*	*	A-0	*	A-60	A-0	-	A-0	*
Accommodation spaces	(3)	A-60	A-0	*	A-0	*	A-60	A-0	-	A-0	*
Stairways	(4)	A-0	A-0	A-0	*	A-0	A-60	A-0	-	A-0	*
Service spaces (low risk)	(5)	A-15	A-0	A-0	A-0	*	A-60	A-0	-	A-0	*
Machinery spaces of category A	(6)	A-60	A-60	A-60	A-60	A-60	*	A-60 ^e	A-0	A-60	*

Space below	Space above	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Other machinery spaces	(7)	A-15	A-0	A-0	A-0	A-0	A-0	*	A-0	A-0	*
Cargo pump-rooms	(8)	-	-	-	-	-	A-0 ^d	A-0	*	-	*
Service spaces (high risk)	(9)	A-60	A-0	A-0	A-0	A-0	A-60	A-0	-	A-0 ^b	*
Open decks	(10)	*	*	*	*	*	*	*	*	*	-

Notes: To be applied to tables 9.7 and 9.8 as appropriate.

^a For clarification as to which applies, see paragraphs 2.3.2 and 2.3.4.

^b Where spaces are of the same numerical category and superscript b appears, a bulkhead or deck of the rating shown in the tables is only required when the adjacent spaces are for a different purpose (e.g. in category (9)). A galley next to a galley does not require a bulkhead but a galley next to a paint room requires an “A-0” bulkhead.

^c Bulkheads separating the wheelhouse, chartroom and radio room from each other may have a “B-0” rating.

^d Bulkheads and decks between cargo pump-rooms and machinery spaces of category A may be penetrated by cargo pump shaft glands and similar gland penetrations, provided that gas tight seals with efficient lubrication or other means of ensuring the permanence of the gas seal are fitted in way of the bulkheads or deck.

^e Fire insulation need not be fitted if the machinery space in category (7) if, in the opinion of the Administration, it has little or no fire risk.

* Where an asterisk appears in the table, the division is required to be of steel or other equivalent material, but is not required to be of “A” class standard. However, where a deck, except an open deck, is penetrated for the passage of electric cables, pipes and vent ducts, such penetrations should be made tight to prevent the passage of flame and smoke. Divisions between control stations (emergency generators) and open decks may have air intake openings without means for closure, unless a fixed gas fire-fighting system is fitted.

3 Penetration in fire-resisting divisions and prevention of heat transmission

3.1 Where “A” class divisions are penetrated, such penetrations shall be tested in accordance with the Fire Test Procedures Code, subject to the provisions of paragraph 4.1.1.5. In the case of ventilation ducts, paragraphs 7.1.2 and 7.3.1 apply. However, where a pipe penetration is made of steel or equivalent material having a thickness of 3mm or greater and a length of not less than 900 mm (preferably 450 mm on each side of the division), and no openings, testing is not required. Such penetrations shall be suitably insulated by extension of the insulation at the same level of the division.

3.2 Where “B” class divisions are penetrated for the passage of electric cables, pipes, trunks, ducts, etc., or for the fitting of ventilation terminals, lighting fixtures and similar devices, arrangements shall be made to ensure that the fire resistance is not impaired, subject to the provisions of paragraph 7.3.2. Pipes other than steel or copper that penetrate “B” class divisions shall be protected by either:

- .1 a fire tested penetration device, suitable for the fire resistance of the division pierced and the type of pipe used; or
- .2 a steel sleeve, having a thickness of not less than 1.8 mm and a length of not less than 900 mm for pipe diameters of 150 mm or more and not less than 600 mm for pipe diameters of less than 150 mm (preferably equally divided to each side of the division). The pipe shall be connected to the ends of the sleeve by flanges or couplings; or the clearance between the sleeve and the pipe shall not exceed 2.5 mm; or any clearance between pipe and sleeve shall be made tight by means of non-combustible or other suitable material.

3.3 Uninsulated metallic pipes penetrating "A" or "B" class divisions shall be of materials having a melting temperature which exceeds 950°C for "A-0" and 850°C for "B-0" class divisions.

3.4 In approving structural fire protection details, the Administration shall have regard to the risk of heat transmission at intersections and terminal points of required thermal barriers. The insulation of a deck or bulkhead shall be carried past the penetration, intersection or terminal point for a distance of at least 450 mm in the case of steel and aluminium structures. If a space is divided with a deck or a bulkhead of "A" class standard having insulation of different values, the insulation with the higher value shall continue on the deck or bulkhead with the insulation of the lesser value for a distance of at least 450 mm.

4 Protection of openings in fire resisting divisions

4.1 Openings in bulkheads and decks in passenger ships

4.1.1 Openings in "A" class divisions

4.1.1.1 Except for hatches between cargo, special category, store, and baggage spaces, and between such spaces and the weather decks, openings shall be provided with permanently attached means of closing which shall be at least as effective for resisting fires as the divisions in which they are fitted.

4.1.1.2 The construction of doors and door frames in "A" class divisions, with the means of securing them when closed, shall provide resistance to fire as well as to the passage of smoke and flame equivalent to that of the bulkheads in which the doors are situated, this being determined in accordance with the Fire Test Procedures Code. Such doors and door frames shall be constructed of steel or other equivalent material. Watertight doors need not be insulated.

4.1.1.3 It shall be possible for each door to be opened and closed from each side of the bulkhead by one person only.

4.1.1.4 Fire doors in main vertical zone bulkheads, galley boundaries and stairway enclosures other than power-operated watertight doors and those which are normally locked, shall satisfy the following requirements:

- .1 the doors shall be self-closing and be capable of closing with an angle of inclination of up to 3.5° opposing closure;

- .2 the approximate time of closure for hinged fire doors shall be no more than 40 s and no less than 10 s from the beginning of their movement with the ship in upright position. The approximate uniform rate of closure for sliding doors shall be of no more than 0.2 m/s and no less than 0.1 m/s with the ship in upright position;
- .3 the doors, except those for emergency escape trunks, shall be capable of remote release from the continuously manned central control station, either simultaneously or in groups and shall be capable of release also individually from a position at both sides of the door. Release switches shall have an on-off function to prevent automatic resetting of the system;
- .4 hold-back hooks not subject to central control station release are prohibited;
- .5 a door closed remotely from the central control station shall be capable of being re-opened from both sides of the door by local control. After such local opening, the door shall automatically close again;
- .6 indication must be provided at the fire door indicator panel in the continuously manned central control station whether each door is closed;
- .7 the release mechanism shall be so designed that the door will automatically close in the event of disruption of the control system or central power supply;
- .8 local power accumulators for power-operated doors shall be provided in the immediate vicinity of the doors to enable the doors to be operated after disruption of the control system or central power supply at least ten times (fully opened and closed) using the local controls;
- .9 disruption of the control system or central power supply at one door shall not impair the safe functioning of the other doors;
- .10 remote-released sliding or power-operated doors shall be equipped with an alarm that sounds at least 5 s but no more than 10 s after the door being released from the central control station and before the door begins to move and continues sounding until the door is completely closed;
- .11 a door designed to re-open upon contacting an object in its path shall re-open not more than 1 m from the point of contact;
- .12 double-leaf doors equipped with a latch necessary for their fire integrity shall have a latch that is automatically activated by the operation of the doors when released by the system;
- .13 doors giving direct access to special category spaces which are power-operated and automatically closed need not be equipped with the alarms and remote-release mechanisms required in paragraphs 4.1.1.4.3 and 4.1.1.4.10;

- .14 the components of the local control system shall be accessible for maintenance and adjusting;
- .15 power-operated doors shall be provided with a control system of an approved type which shall be able to operate in case of fire and be in accordance with the Fire Test Procedures Code. This system shall satisfy the following requirements:
 - .15.1 the control system shall be able to operate the door at the temperature of at least 200°C for at least 60 min, served by the power supply;
 - .15.2 the power supply for all other doors not subject to fire shall not be impaired; and
 - .15.3 at temperatures exceeding 200°C the control system shall be automatically isolated from the power supply and shall be capable of keeping the door closed up to at least 945°C.

4.1.1.5 In ships carrying not more than 36 passengers, where a space is protected by an automatic sprinkler fire detection and alarm system complying with the provisions of the Fire Safety Systems Code or fitted with a continuous “B” class ceiling, openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the “A” class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration.

4.1.1.6 The requirements for “A” class integrity of the outer boundaries of a ship shall not apply to glass partitions, windows and sidescuttles, provided that there is no requirement for such boundaries to have “A” class integrity in paragraph 4.1.3.3. The requirements for “A” class integrity of the outer boundaries of the ship shall not apply to exterior doors, except for those in superstructures and deckhouses facing life-saving appliances, embarkation and external assembly station areas, external stairs and open decks used for escape routes. Stairway enclosure doors need not meet this requirement.

4.1.1.7 Except for watertight doors, weathertight doors (semi-watertight doors), doors leading to the open deck and doors which need to be reasonably gastight, all “A” class doors located in stairways, public spaces and main vertical zone bulkheads in escape routes shall be equipped with a self-closing hose port of material, construction and fire resistance which is equivalent to the door into which it is fitted, and shall be a 150 mm square clear opening with the door closed and shall be inset into the lower edge of the door, opposite the door hinges or, in the case of sliding doors, nearest the opening.

4.1.1.8 Where it is necessary that a ventilation duct passes through a main vertical zone division, a fail-safe automatic closing fire damper shall be fitted adjacent to the division. The damper shall also be capable of being manually closed from each side of the division. The operating position shall be readily accessible and be marked in red light-reflecting colour. The duct between the division and the damper shall be of steel

or other equivalent material and, if necessary, insulated to comply with the requirements of paragraph 3.1. The damper shall be fitted on at least one side of the division with a visible indicator showing whether the damper is in the open position.

4.1.2 Openings in "B" class divisions

4.1.2.1 Doors and door frames in "B" class divisions and means of securing them shall provide a method of closure which shall have resistance to fire equivalent to that of the divisions, this being determined in accordance with the Fire Test Procedure Code except that ventilation openings may be permitted in the lower portion of such doors. Where such opening is in or under a door the total net area of any such opening or openings shall not exceed 0.05 m². Alternatively, a non-combustible air balance duct routed between the cabin and the corridor, and located below the sanitary unit is permitted where the cross-sectional area of the duct does not exceed 0.05 m². All ventilation openings shall be fitted with a grill made of non-combustible material. Doors shall be non-combustible.

4.1.2.2 Cabin doors in "B" class divisions shall be of a self-closing type. Hold-back hooks are not permitted.

4.1.2.3 The requirements for "B" class integrity of the outer boundaries of a ship shall not apply to glass partitions, windows and sidescuttles. Similarly, the requirements for "B" class integrity shall not apply to exterior doors in superstructures and deckhouses. For ships carrying not more than 36 passengers, the Administration may permit the use of combustible materials in doors separating cabins from the individual interior sanitary spaces such as showers.

4.1.2.4 In ships carrying not more than 36 passengers, where an automatic sprinkler system complying with the provisions of the Fire Safety Systems Code is fitted:

- .1 openings in decks not forming steps in main vertical zones nor bounding horizontal zones shall be closed reasonably tight and such decks shall meet the "B" class integrity requirements in so far as is reasonable and practicable in the opinion of the Administration; and
- .2 openings in corridor bulkheads of "B" class materials shall be protected in accordance with the provisions of paragraph 2.2.2.

4.1.3 Windows and sidescuttles

4.1.3.1 Windows and sidescuttles in bulkheads within accommodation and service spaces and control stations other than those to which the provisions of paragraph 4.1.1.6 and of paragraph 4.1.2.3 apply, shall be so constructed as to preserve the integrity requirements of the type of bulkheads in which they are fitted, this being determined in accordance with the Fire Test Procedures Code.

4.1.3.2 Notwithstanding the requirements of tables 9.1 to 9.4, windows and sidescuttles in bulkheads separating accommodation and service spaces and control stations from weather shall be constructed with frames of steel or other suitable material. The glass shall be retained by a metal glazing bead or angle.

4.1.3.3 Windows facing life-saving appliances, embarkation and assembly stations, external stairs and open decks used for escape routes, and windows situated below liferaft and escape slide embarkation areas shall have fire integrity as required in table 9.1. Where automatic dedicated sprinkler heads are provided for windows, "A-0" windows may be accepted as equivalent. To be considered under this paragraph, the sprinkler heads must either be:

- .1 dedicated heads located above the windows, and installed in addition to the conventional ceiling sprinklers; or
- .2 conventional ceiling sprinkler heads arranged such that the window is protected by an average application rate of at least 5 l/min per square metre and the additional window area is included in the calculation of the area of coverage.

Windows located in the ship's side below the lifeboat embarkation area shall have fire integrity at least equal to "A-0" class.

4.2 Doors in fire-resisting divisions in cargo ships

4.2.1 The fire resistance of doors shall be equivalent to that of the division in which they are fitted, this being determined in accordance with the Fire Test Procedures Code. Doors and door frames in "A" class divisions shall be constructed of steel. Doors in "B" class divisions shall be non-combustible. Doors fitted in boundary bulkheads of machinery spaces of category A shall be reasonably gastight and self-closing. In ships constructed according to method IC, the Administration may permit the use of combustible materials in doors separating cabins from individual interior sanitary accommodation such as showers.

4.2.2 Doors required to be self-closing shall not be fitted with hold-back hooks. However, hold-back arrangements fitted with remote release devices of the fail-safe type may be utilized.

4.2.3 In corridor bulkheads ventilation openings may be permitted in and under the doors of cabins and public spaces. Ventilation openings are also permitted in "B" class doors leading to lavatories, offices, pantries, lockers and store rooms. Except as permitted below, the openings shall be provided only in the lower half of a door. Where such an opening is in or under a door the total net area of any such opening or openings shall not exceed 0.05 m². Alternatively, a non-combustible air balance duct routed between the cabin and the corridor, and located below the sanitary unit is permitted where the cross-sectional area of the duct does not exceed 0.05 m². Ventilation openings, except those under the door, shall be fitted with a grille made of non-combustible material.

4.2.4 Watertight doors need not be insulated.

5 Protection of openings in machinery spaces boundaries

5.1 Application

5.1.1 The provision of this paragraph shall apply to machinery spaces of category A and, where the Administration considers it desirable, to other machinery spaces.

5.2 Protection of openings in machinery space boundaries

5.2.1 The number of skylights, doors, ventilators, openings in funnels to permit exhaust ventilation and other openings to machinery spaces shall be reduced to a minimum consistent with the needs of ventilation and the proper and safe working of the ship.

5.2.2 Skylights shall be of steel and shall not contain glass panels.

5.2.3 Means of control shall be provided for closing power-operated doors or actuating release mechanisms on doors other than power-operated watertight doors. The control shall be located outside the space concerned, where they will not be cut off in the event of fire in the space it serves.

5.2.4 In passenger ships, the means of control required in paragraph 5.2.3 shall be situated at one control position or grouped in as few positions as possible to the satisfaction of the Administration. Such positions shall have safe access from the open deck.

5.2.5 In passenger ships, doors, other than power-operated watertight doors shall be so arranged that positive closure is assured in case of fire in the space by power-operated closing arrangements or by the provision of self-closing doors capable of closing against an inclination of 3.5° opposing closure, and having a fail-safe hold-back arrangement, provided with a remotely operated release device. Doors for emergency escape trunks need not be fitted with a fail-safe hold-back facility and a remotely operated release device.

5.2.6 Windows shall not be fitted in machinery space boundaries. However, this does not preclude the use of glass in control rooms within the machinery spaces.

6 Protection of cargo space boundaries

6.1 In passenger ships carrying more than 36 passengers, the boundary bulkheads and decks of special category and ro-ro spaces shall be insulated to "A-60" class standard. However, where a category (5), (9) and (10) space, as defined in paragraph 2.2.3, is on one side of the division the standard may be reduced to "A-0". Where fuel oil tanks are below a special category space, the integrity of the deck between such spaces may be reduced to "A-0" standard.

6.2 In passenger ships carrying not more than 36 passengers, the boundary bulkheads of special category spaces shall be insulated as required for category (11) spaces in table 9.4.

6.3 In passenger ships carrying not more than 36 passengers the boundary bulkheads and decks of closed and open ro-ro spaces shall have a fire integrity as required for category (8) spaces in table 9.3 and the horizontal boundaries as required for category (8) spaces in table 9.4.

6.4 In passenger ships, indicators shall be provided on the navigating bridge which shall indicate when any fire door leading to or from the special category spaces is closed.

6.5 In tankers, for the protection of cargo tanks carrying crude oil and petroleum products having a flashpoint not exceeding 60°C, materials readily rendered ineffective by heat shall not be used for valves, fittings, tank opening covers, cargo vent piping, and cargo piping so as to prevent the spread of fire to the cargo.

7 Ventilation systems

7.1 Duct and dampers

7.1.1 Ventilation ducts shall be of non-combustible material. However, short ducts, not generally exceeding 2 m in length and with a free cross-sectional area* not exceeding 0.02 m², need not be non-combustible subject to the following conditions:

- .1 the ducts are made of a material which has low flame spread characteristics;
- .2 the ducts are only used at the end of the ventilation device; and
- .3 the ducts are not situated less than 600 mm, measured along the duct, from an opening in an "A" or "B" class division including continuous "B" class ceiling.

7.1.2 The following arrangements shall be tested in accordance with the Fire Test Procedures Code:

- .1 fire dampers, including their relevant means of operation; and
- .2 duct penetrations through "A" class divisions. However, the test is not required where steel sleeves are directly joined to ventilation ducts by means of riveted or screwed flanges or by welding.

7.2 Arrangement of ducts

7.2.1 The ventilation systems for machinery spaces of category A, vehicle spaces, ro-ro spaces, galleys, special category spaces and cargo spaces shall, in general, be separated from each other and from the ventilation systems serving other spaces. Except that the galley ventilation systems on cargo ships of less than 4,000 gross tonnage and in passenger ships carrying not more than 36 passengers, need not be completely separated, but may be served by separate ducts from a ventilation unit serving other spaces. In any case, an automatic fire damper shall be fitted in the galley ventilation duct near the ventilation unit. Ducts provided for the ventilation of machinery spaces of category A, galleys, vehicle spaces, ro-ro spaces or special category spaces shall not pass through accommodation spaces, service spaces or control stations unless they comply with the conditions specified in paragraphs 7.2.1.1.1 to 7.2.1.1.4 or 7.2.1.2.1 and 7.2.1.2.2 below:

- .1.1 the ducts are constructed of steel having a thickness of at least

* The term "free cross-sectional area" means, even in the case of a pre-insulated duct, the area calculated on the basis of the inner diameter of the duct.

3 mm and 5 mm for ducts the widths or diameters of which are up to and including 300 mm and 760 mm and over respectively and, in the case of such ducts, the widths or diameters of which are between 300 mm and 760 mm having a thickness obtained by interpolation;

- .1.2 the ducts are suitably supported and stiffened;
- .1.3 the ducts are fitted with automatic fire dampers close to the boundaries penetrated; and
- .1.4 the ducts are insulated to “A-60” class standard from the machinery spaces, galleys, vehicle spaces, ro-ro spaces or special category spaces to a point at least 5 m beyond each fire damper;

or

- .2.1 the ducts are constructed of steel in accordance with paragraphs 7.2.1.1.1 and 7.2.1.1.2; and
- .2.2 the ducts are insulated to “A-60” class standard throughout the accommodation spaces, service spaces or control stations; except that penetrations of main zone divisions shall also comply with the requirements of paragraph 4.1.1.8.

7.2.2 Ducts provided for ventilation to accommodation spaces, service spaces or control stations shall not pass through machinery spaces of category A, galleys, vehicle spaces, ro-ro spaces or special category spaces unless they comply with the conditions specified in paragraphs 7.2.2.1.1 to 7.2.2.1.3 or 7.2.2.2.1 and 7.2.2.2.2 below:

- .1.1 the ducts where they pass through a machinery space of category A, galley, vehicle space, ro-ro space or special category space are constructed of steel in accordance with paragraphs 7.2.1.1.1 and 7.2.1.1.2;
- .1.2 automatic fire dampers are fitted close to the boundaries penetrated; and
- .1.3 the integrity of the machinery space, galley, vehicle space, ro-ro space or special category space boundaries is maintained at the penetrations;

or

- .2.1 the ducts where they pass through a machinery space of category A, galley, vehicle space, ro-ro space or special category space are constructed of steel in accordance with paragraphs 7.2.1.1.1 and 7.2.1.1.2; and
- .2.2 the ducts are insulated to “A-60” standard within the machinery space, galley, vehicle space, ro-ro space or special category space; except that penetrations of main zone divisions shall also comply with the requirements of paragraph 4.1.1.8.

7.3 Details of duct penetrations

7.3.1 Where a thin plated duct with a free cross-sectional area equal to, or less than, 0.02 m² passes through “A” class bulkheads or decks, the opening shall be lined with a steel sheet sleeve having a thickness of at least 3 mm and a length of at least 200 mm, divided preferably into

100 mm on each side of the bulkhead or, in the case of the deck, wholly laid on the lower side of the decks pierced. Where ventilation ducts with a free cross-sectional area exceeding 0.02 m² pass through "A" class bulkheads or decks, the opening shall be lined with a steel sheet sleeve. However, where such ducts are of steel construction and pass through a deck or bulkhead, the ducts and sleeves shall comply with the following:

- .1 The sleeves shall have a thickness of at least 3 mm and a length of at least 900 mm. When passing through bulkheads, this length shall be divided preferably into 450 mm on each side of the bulkhead. These ducts, or sleeves lining such ducts, shall be provided with fire insulation. The insulation shall have at least the same fire integrity as the bulkhead or deck through which the duct passes; and
- .2 Ducts with a free cross-sectional area exceeding 0.075 m² shall be fitted with fire dampers in addition to the requirements of paragraph 7.3.1.1. The fire damper shall operate automatically, but shall also be capable of being closed manually from both sides of the bulkhead or deck. The damper shall be provided with an indicator which shows whether the damper is open or closed. Fire dampers are not required, however, where ducts pass through spaces surrounded by "A" class divisions, without serving those spaces, provided those ducts have the same fire integrity as the divisions which they pierce. Fire dampers shall be easily accessible. Where they are placed behind ceilings or linings, these ceilings or linings shall be provided with an inspection door on which a plate reporting the identification number of the fire damper is provided. The fire damper identification number shall also be placed on any remote controls required.

7.3.2 Ventilation ducts with a free cross-sectional area exceeding 0.02 m² passing through "B" class bulkheads shall be lined with steel sheet sleeves of 900 mm in length divided preferably into 450 mm on each side of the bulkheads unless the duct is of steel for this length.

7.4 Ventilation systems for passenger ships carrying more than 36 passengers

7.4.1 The ventilation system of a passenger ship carrying more than 36 passengers shall be in compliance with the following additional requirements.

7.4.2 In general, the ventilation fans shall be so disposed that the ducts reaching the various spaces remain within the main vertical zone.

7.4.3 Where ventilation systems penetrate decks, precautions shall be taken, in addition to those relating to the fire integrity of the deck required by paragraphs 3.1 and 4.1.1.5, to reduce the likelihood of smoke and hot gases passing from one 'tween-deck space to another through the system. In addition to insulation requirements contained in paragraph 7.4, vertical ducts shall, if necessary, be insulated as required by the appropriate tables 9.1 and 9.2.

7.4.4 Except in cargo spaces, ventilation ducts shall be constructed of the following materials:

- .1 ducts not less than 0.075 m² in free cross-sectional area and all vertical ducts serving more than a single 'tween-deck space shall be constructed of steel or other equivalent material;
- .2 ducts less than 0.075 m² in free cross-sectional area other than the vertical ducts referred to in paragraph 7.4.4.1, shall be constructed of non-combustible materials. Where such ducts penetrate "A" or "B" class division due regard shall be given to ensuring the fire integrity of the division; and
- .3 short length of duct, not in general exceeding 0.02m² in free cross-sectional area nor 2 m in length, need not be non-combustible provided that all of the following conditions are met:
 - .3.1 the duct is constructed of a material which has low flame spread characteristics;
 - .3.2 the duct is used only at the terminal end of the ventilation system; and
 - .3.3 the duct is not located closer than 600mm measured along its length to a penetration of an "A" or "B" class division, including continuous "B" class ceilings.

7.4.5 Stairway enclosures shall be ventilated and served by an independent fan and duct system which shall not serve any other spaces in the ventilation systems.

7.4.6 Exhaust ducts shall be provided with hatches for inspection and cleaning. The hatches shall be located near the fire dampers.

7.5 Exhaust ducts from galley ranges

7.5.1 Requirements for passenger ships carrying more than 36 passengers

Exhaust ducts from galley ranges shall meet the requirements of paragraphs 7.2.1.2.1 and 7.2.1.2.2 and shall be fitted with:

- .1 a grease trap readily removable for cleaning unless an alternative approved grease removal system is fitted;
- .2 a fire damper located in the lower end of the duct which is automatically and remotely operated, and in addition a remotely operated fire damper located in the upper end of the duct;
- .3 a fixed means for extinguishing a fire within the duct;
- .4 remote-control arrangements for shutting off the exhaust fans and supply fans, for operating the fire dampers mentioned in paragraph 7.5.1.2 and for operating the fire-extinguishing system, which shall be placed in a position close to the entrance to the galley. Where a multi-branch system is installed, a remote means located with the above controls shall be provided to close all branches exhausting through the same main duct before an extinguishing medium is released into the system; and
- .5 suitably located hatches for inspection and cleaning.

7.5.2 Requirements for cargo ships and passenger ships carrying not more than 36 passenger ships

7.5.2.1 Where they pass through accommodation spaces or spaces containing combustible materials, the exhaust ducts from galley ranges shall be constructed of "A" class divisions. Each exhaust duct shall be fitted with:

- .1 a grease trap readily removable for cleaning;
- .2 a fire damper located in the lower end of the duct;
- .3 arrangements, operable from within the galley, for shutting off the exhaust fans; and
- .4 fixed means for extinguishing a fire within the duct.

Regulation 10

Fire fighting

1 Purpose

The purpose of this regulation is to suppress and swiftly extinguish a fire in the space of origin. For this purpose, the following functional requirements shall be met:

- .1 fixed fire extinguishing systems shall be installed having due regard to the fire growth potential of the protected spaces; and
- .2 fire extinguishing appliances shall be readily available.

2. Water supply systems

Ships shall be provided with fire pumps, fire mains, hydrants and hoses complying with the applicable requirements of this regulation.

2.1 Fire mains and hydrants

2.1.1 General Materials readily rendered ineffective by heat shall not be used for fire mains and hydrants unless adequately protected. The pipes and hydrants shall be so placed that the fire hoses may be easily coupled to them. The arrangement of pipes and hydrants shall be such as to avoid the possibility of freezing. Suitable drainage provisions shall be provided for fire main piping. Isolation valves shall be installed for all open deck fire main branches used for purposes other than fire fighting. In ships where deck cargo may be carried, the positions of the hydrants shall be such that they are always readily accessible and the pipes shall be arranged as far as practicable to avoid risk of damage by such cargo.

2.1.2 Ready availability of water supply

The arrangements for the ready availability of water supply shall be:

- .1 in passenger ships:
 - .1.1 of 1,000 gross tonnage and upwards such that at least one effective jet of water is immediately available from any hydrant in an interior location and so as to ensure the continuation of the output of water by the automatic starting of one required fire pump;
 - .1.2 of less than 1,000 gross tonnage by automatic start of at least

one fire pump or by remote starting from the navigation bridge of at least one fire pump. If the pump starts automatically or if the bottom valve cannot be opened from where the pump is remotely started, the bottom valve shall always be kept open; and

- .1.3 if fitted with periodically unattended machinery spaces in accordance with Regulation II-1/54, the Administration shall determine provisions for fixed water fire-extinguishing arrangement for such spaces equivalent to those required for normally attended machinery spaces;
- .2 in cargo ships:
 - .2.1 to the satisfaction of the Administration; and
 - .2.2 with a periodically unattended machinery space or when only one person is required on watch, there shall be immediate water delivery from the fire main system at a suitable pressure, either by remote starting of one of the main fire pumps with remote starting from the navigating bridge and fire control station, if any, or permanent pressurization of the fire main system by one of the main fire pumps, except that the Administration may waive this requirement for cargo ships of less than 1,600 gross tonnage if the fire pump starting arrangement in the machinery space is in an easily accessible position.

2.1.3 Diameter of fire mains

The diameter of the fire main and water service pipes shall be sufficient for the effective distribution of the maximum required discharge from two fire pumps operating simultaneously, except that in the case of cargo ships the diameter need only be sufficient for the discharge of 140 m³/h.

2.1.4 Isolating valves and relief valves

2.1.4.1 Isolating valves to separate the section of the fire main within the machinery space containing the main fire pump or pumps from the rest of the fire main shall be fitted in an easily accessible and tenable position outside the machinery spaces. The fire main shall be so arranged that when the isolating valves are shut all the hydrants on the ship, except those in the machinery space referred to above, can be supplied with water by another fire pump or an emergency fire pump. The emergency fire pump, its seawater inlet, and suction and delivery pipes and isolating valves shall be located outside the machinery space. If this arrangement cannot be made, the sea-chest may be fitted in the machinery space if the valve is remotely controlled from a position in the same compartment as the emergency fire pump and the suction pipe is as short as practicable. Short lengths of suction or discharge piping may penetrate the machinery space, provided they are enclosed in a substantial steel casing, or are insulated to A-60 class standards. The pipes shall have substantial wall thickness, but in no case less than 11 mm, and shall be welded except for the flanged connection to the sea inlet valve.

2.1.4.2 A valve shall be fitted to serve each fire hydrant so that any fire hose may be removed while the fire pumps are in operation.

2.1.4.3 Relief valves shall be provided in conjunction with fire pumps if the pumps are capable of developing a pressure exceeding the design pressure of the water service pipes, hydrants and hoses. These valves shall be so placed and adjusted as to prevent excessive pressure in any part of the fire main system.

2.1.4.4 In tankers, isolation valves shall be fitted in the fire main at poop front in a protected position and on the tank deck at intervals of not more than 40 m to preserve the integrity of the fire main system in case of fire or explosion.

2.1.5 Number and position of hydrants

2.1.5.1 The number and position of hydrants shall be such that at least two jets of water not emanating from the same hydrant, one of which shall be from a single length of hose, may reach any part of the ship normally accessible to the passengers or crew while the ship is being navigated and any part of any cargo space when empty, any ro-ro space or any vehicle space in which latter case the two jets shall reach any part of the space, each from a single length of hose. Furthermore, such hydrants shall be positioned near the accesses to the protected spaces.

2.1.5.2 In addition to the requirements in the paragraph 2.1.5.1, passenger ships shall comply with the following:

- .1 in the accommodation, service and machinery spaces the number and position of hydrants shall be such that the requirements of paragraph 2.1.5.1 may be complied with when all watertight doors and all doors in main vertical zone bulkheads are closed; and
- .2 where access is provided to a machinery space of category A at a low level from an adjacent shaft tunnel, two hydrants shall be provided external to, but near the entrance to that machinery space. Where such access is provided from other spaces, in one of those spaces two hydrants shall be provided near the entrance to the machinery space of category A. Such provision need not be made where the tunnel or adjacent spaces are not part of the escape route.

2.1.6 Pressure at hydrants

With the two pumps simultaneously delivering water through the nozzles specified in paragraph 2.3.3, with the quantity of water as specified in paragraph 2.1.3, through any adjacent hydrants, the following minimum pressures shall be maintained at all hydrants:

- .1 for passenger ships:

4,000 gross tonnage and upwards	0.40 N/mm ²
less than 4,000 gross tonnage	0.30 N/mm ² ;
- .2 for cargo ships,

6,000 gross tonnage and upwards	0.27 N/mm ²
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less than 6,000 gross tonnage; 0.25 N/mm²;
and

- .3 the maximum pressure at any hydrant shall not exceed that at which the effective control of a fire hose can be demonstrated.

2.1.7 International shore connection

2.1.7.1 Ships of 500 gross tonnage and upwards shall be provided with at least one international shore connection complying with the Fire Safety Systems Code.

2.1.7.2 Facilities shall be available enabling such a connection to be used on either side of the ship.

2.2 Fire pumps

2.2.1 Pumps accepted as fire pumps

Sanitary, ballast, bilge or general service pumps may be accepted as fire pumps, provided that they are not normally used for pumping oil and that if they are subject to occasional duty for the transfer or pumping of oil fuel, suitable change-over arrangements are fitted.

2.2.2 Number of fire pumps

Ships shall be provided with independently driven fire pumps as follows:

- | | |
|---------------------------------|--|
| .1 in passenger ships of: | |
| 4,000 gross tonnage and upwards | at least three |
| less than 4,000 gross tonnage | at least two |
| .2 in cargo ships of: | |
| 1,000 gross tonnage and upwards | at least two |
| less than 1,000 gross tonnage | at least two power driven pumps, one of which shall be independently driven. |

2.2.3 Arrangement of fire pumps and fire mains

2.2.3.1 Fire pumps

The arrangement of sea connections, fire pumps and their sources of power shall be as to ensure that:

- .1 in passenger ships of 1,000 gross tonnage and upwards, in the event of a fire in any one compartment all the fire pumps will not be put out of action; and
- .2 in passenger ships of less than 1,000 gross tonnage and in cargo ships, if a fire in any one compartment could put all the pumps out of action, there shall be an alternative means consisting of an emergency fire pump complying with the provisions of the Fire Safety Systems Code with its source of power and sea connection located outside the space where the main fire pumps or their sources of power are located.

2.2.3.2 Requirements for the space containing the emergency fire pump

2.2.3.2.1 Location of the space

The space containing the fire pump shall not be contiguous to the

boundaries of machinery spaces of category A or those spaces containing main fire pumps. Where this is not practicable, the common bulkhead between the two spaces shall be insulated to a standard of structural fire protection equivalent to that required for a control station

2.2.3.2.2 Access to the emergency fire pump

No direct access shall be permitted between the machinery space and the space containing the emergency fire pump and its source of power. When this is impracticable, the Administration may accept an arrangement where the access is by means of an airlock with the door of the machinery space being of A-60 class standard, and the other door being at least steel, both reasonably gastight, self-closing and without any hold back arrangements. Alternatively, the access may be through a watertight door capable of being operated from a space remote from the machinery space and the space containing the emergency fire pump and unlikely to be cut off in the event of fire in those spaces. In such cases, a second means of access to the space containing the emergency fire pump and its source of power shall be provided.

2.2.3.2.3 Ventilation of the emergency fire pump space

Ventilation arrangements to the space containing the independent source of power for the emergency fire pump shall be such as to preclude, as far as practicable, the possibility of smoke from a machinery space fire entering or being drawn into that space.

2.2.3.3 Additional pumps for cargo ships

In addition, in cargo ships where other pumps, such as general service, bilge and ballast, etc., are fitted in a machinery space, arrangements shall be made to ensure that at least one of these pumps, having the capacity and pressure required by paragraphs 2.1.6.2 and 2.2.4.2, is capable of providing water to the fire main.

2.2.4 Capacity of fire pumps

2.2.4.1 Total capacity of required fire pumps

The required fire pumps shall be capable of delivering for fire-fighting purposes a quantity of water, at the pressure specified in paragraph 2.1.6, as follows:

- .1 pumps in passenger ships, the quantity of water is not less than two thirds of the quantity required to be dealt with by the bilge pumps when employed for bilge pumping; and
- .2 pumps in cargo ships, other than any emergency pump, the quantity of water is not less than four thirds of the quantity required under regulation II-1/21 to be dealt with by each of the independent bilge pumps in a passenger ship of the same dimension when employed in bilge pumping, provided that in no cargo ship need the total required capacity of the fire pumps exceed 180 m³/h.

2.2.4.2 Capacity of each fire pump

Each of the required fire pumps (other than any emergency pump required in paragraph 2.2.3.1.2 for cargo ships) shall have a capacity not less than 80% of the total required capacity divided by the minimum

number of required fire pumps but in any case not less than 25 m³/h and each such pump shall in any event be capable of delivering at least the two required jets of water. These fire pumps shall be capable of supplying the fire main system under the required conditions. Where more pumps than the minimum of required pumps are installed such additional pumps shall have a capacity of at least 25 m³/h and shall be capable of delivering at least the two jets of water required in paragraph 2.1.5.1.

2.3 Fire hoses and nozzles

2.3.1 General specifications

2.3.1.1 Fire hoses shall be of non-perishable material approved by the Administration and shall be sufficient in length to project a jet of water to any of the spaces in which they may be required to be used. Each hose shall be provided with a nozzle and the necessary couplings. Hoses specified in this chapter as “fire hoses” shall, together with any necessary fittings and tools, be kept ready for use in conspicuous positions near the water service hydrants or connections. Additionally, in interior locations in passenger ships carrying more than 36 passengers fire hoses shall be connected to the hydrants at all times. Fire hoses shall have a length of at least 10 m, but not more than:

- .1 15 m in machinery spaces;
- .2 20 m in other spaces and open decks; and
- .3 25 m for open decks on ships with a maximum breadth in excess of 30 m.

2.3.1.2 Unless one hose and nozzle is provided for each hydrant in the ship, there shall be complete interchangeability of hose couplings and nozzles.

2.3.2 Number and diameter of fire hoses

2.3.2.1 Ships shall be provided with fire hoses the number and diameter of which shall be to the satisfaction of the Administration.

2.3.2.2 In passenger ships, there shall be at least one fire hose for each of the hydrants required by paragraph 2.1.5 and these hoses shall be used only for the purposes of extinguishing fires or testing the fire-extinguishing apparatus at fire drills and surveys.

2.3.2.3 In cargo ships:

- .1 of 1,000 gross tonnage and upwards, the number of fire hoses to be provided shall be one for each 30 m length of the ship and one spare but in no case less than five in all. This number does not include any hoses required in any engine or boiler room. The Administration may increase the number of hoses required so as to ensure that hoses in sufficient number are available and accessible at all times, having regard to the type of ship and the nature of trade in which the ship is employed. Ships carrying dangerous goods in accordance with regulation 19 shall be provided with 3 hoses and nozzles, in addition to those required above; and
- .2 of less than 1,000 gross tonnage, the number of fire hoses to be provided shall be calculated in accordance with the provisions

of paragraph 2.3.2.3.1. However, the number of hoses shall in no case be less than three.

2.3.3 Size and types of nozzles

2.3.3.1 For the purposes of this chapter, standard nozzle sizes shall be 12 mm, 16 mm and 19 mm or as near thereto as possible. Larger diameter nozzles may be permitted at the discretion of the Administration.

2.3.3.2 For accommodation and service spaces, a nozzle size greater than 12 mm need not be used.

2.3.3.3 For machinery spaces and exterior locations, the nozzle size shall be such as to obtain the maximum discharge possible from two jets at the pressure mentioned in paragraph 2.1.6 from the smallest pump, provided that a nozzle size greater than 19 mm need not be used.

2.3.3.4 Nozzles shall be of an approved dual-purpose type (i.e., spray/jet type) incorporating a shutoff.

3 Portable fire extinguishers

3.1 Type and design Portable fire extinguishers shall comply with the requirements of the Fire Safety Systems Code.

3.2 Arrangement of fire extinguishers

3.2.1 Accommodation spaces, service spaces and control stations shall be provided with portable fire extinguishers of appropriate types and in sufficient number to the satisfaction of the Administration. Ships of 1,000 gross tonnage and upwards shall carry at least five portable fire extinguishers.

3.2.2 One of the portable fire extinguishers intended for use in any space shall be stowed near the entrance to that space.

3.2.3 Carbon dioxide fire extinguishers shall not be placed in accommodation spaces. In control stations and other spaces containing electrical or electronic equipment or appliances necessary for the safety of the ship, fire extinguishers should be provided whose extinguishing media are neither electrically conductive nor harmful to the equipment and appliances.

3.2.4 Fire extinguishers shall be situated ready for use at easily visible places, which can be reached quickly and easily at any time in the event of a fire, and in such a way that their serviceability is not impaired by the weather, vibration or other external factors. Portable fire extinguishers shall be provided with devices which indicate whether they have been used.

3.3 Spare charges

3.3.1 Spare charges shall be provided for 100% of the first 10 extinguishers and 50% of the remaining fire extinguishers capable of being recharged on board. Not more than 60 total spare charges are required. Instructions for recharging shall be carried on board.

3.3.2 For fire extinguishers which cannot be recharged onboard, additional portable fire extinguishers of the same quantity, type, capacity and number as determined in paragraph 3.3.1 above shall be provided in lieu of spare charges.

4 Fixed fire-extinguishing systems

4.1 Types of fixed fire-extinguishing systems

4.1.1 A fixed fire-extinguishing system required by paragraph 5 below may be any of the following systems:

- .1 a fixed gas fire-extinguishing system complying with the provisions of the Fire Safety Systems Code;
- .2 a fixed high-expansion foam fire-extinguishing system complying with the provisions of the Fire Safety Systems Code; and
- .3 a fixed pressure water-spraying fire-extinguishing system complying with the provisions of the Fire Safety Systems Code.

4.1.2 Where a fixed fire-extinguishing system not required by this chapter is installed, it shall meet the requirements of the relevant regulations of this chapter and the Fire Safety Systems Code.

4.1.3 Fire-extinguishing systems using Halon 1211, 1301, and 2402 and perfluorocarbons shall be prohibited.

4.1.4 In general, the Administration shall not permit the use of steam as a fire-extinguishing medium in fixed fire-extinguishing systems. Where the use of steam is permitted by the Administration, it shall be used only in restricted areas as an addition to the required fire-extinguishing system and shall comply with the requirements of the Fire Safety System Code.

4.2 Closing appliances for fixed gas fire-extinguishing systems

Where a fixed gas fire-extinguishing system is used, openings which may admit air to, or allow gas to escape from, a protected space shall be capable of being closed from outside the protected space.

4.3 Storage rooms of fire-extinguishing medium

When the fire-extinguishing medium is stored outside a protected space, it shall be stored in a room which is located behind the forward collision bulkhead, and is used for no other purposes. Any entrance to such a storage room shall preferably be from the open deck and shall be independent of the protected space. If the storage space is located below deck, it shall be located no more than one deck below the open deck and shall be directly accessible by a stairway or ladder from the open deck. Spaces which are located below deck or spaces where access from the open deck is not provided, shall be fitted with a mechanical ventilation system designed to take exhaust air from the bottom of the space and shall be sized to provide at least 6 air changes per hour. Access doors shall open outwards, and bulkheads and decks including doors and other means of closing any opening therein, which form the boundaries between such rooms and adjacent enclosed spaces shall be gastight. For the purpose of the application of tables 9.1 to 9.8, such storage rooms shall be treated as fire control stations.

4.4 Water pumps for other fire-extinguishing systems

Pumps, other than those serving the fire main, required for the provision of water for fire-extinguishing systems required by this chapter, their sources of power and their controls shall be installed outside the

space or spaces protected by such systems and shall be so arranged that a fire in the space or spaces protected will not put any such system out of action.

5 Fire-extinguishing arrangements in machinery spaces

5.1 Machinery spaces containing oil-fired boilers or oil fuel units

5.1.1 Fixed fire-extinguishing systems

Machinery spaces of category A containing oil-fired boilers or oil fuel units shall be provided with any one of the fixed fire-extinguishing systems in paragraph 4.1. In each case, if the engine and boiler rooms are not entirely separate, or if fuel oil can drain from the boiler room into the engine-room, the combined engine and boiler rooms shall be considered as one compartment.

5.1.2 Additional fire-extinguishing arrangements

5.1.2.1 There shall be in each boiler room or at an entrance outside of the boiler room at least one portable foam applicator unit complying with the provisions of the Fire Safety Systems Code.

5.1.2.2 There shall be at least two portable foam extinguishers or equivalent in each firing space in each boiler room and in each space in which a part of the oil fuel installation is situated. There shall be not less than one approved foam-type extinguisher of at least 135 l capacity or equivalent in each boiler room. These extinguishers shall be provided with hoses on reels suitable for reaching any part of the boiler room. In the case of domestic boilers of less than 175 kW an approved foam-type extinguisher of at least 135 l capacity is not required.

5.1.2.3 In each firing space there shall be a receptacle containing at least 0.1 m³ sand, sawdust impregnated with soda, or other approved dry material, along with a suitable shovel for spreading the material. An approved portable extinguisher may be substituted as an alternative.

5.2 Machinery spaces containing internal combustion machinery

5.2.1 Fixed fire-extinguishing systems

Machinery spaces of category A containing internal combustion machinery shall be provided with one of the fixed fire-extinguishing systems in paragraph 4.1.

5.2.2 Additional fire-extinguishing arrangements

5.2.2.1 There shall be at least one portable foam applicator unit complying with the provisions of the Fire Safety Systems Code.

5.2.2.2 There shall be in each such space approved foam-type fire extinguishers, each of at least 45 l capacity or equivalent, sufficient in number to enable foam or its equivalent to be directed on to any part of the fuel and lubricating oil pressure systems, gearing and other fire hazards. In addition, there shall be provided a sufficient number of portable foam extinguishers or equivalent which shall be so located that no point in the space is more than 10 m walking distance from an extinguisher and that there are at least two such extinguishers in each such space. For smaller spaces of cargo ships the Administration may consider relaxing this requirement.

5.3 Machinery spaces containing steam turbines or enclosed steam engines

5.3.1 Fixed fire-extinguishing systems

In spaces containing steam turbines or enclosed steam engines used for main propulsion or other purposes having in the aggregate a total output of not less than 375 kW, one of the fire-extinguishing systems specified in paragraph 4.1 shall be provided if such spaces are periodically unattended.

5.3.2 Additional fire-extinguishing arrangements

5.3.2.1 There shall be approved foam fire-extinguishers each of at least 45 l capacity or equivalent sufficient in number to enable foam or its equivalent to be directed on to any part of the pressure lubrication system, on to any part of the casings enclosing pressure lubricated parts of the turbines, engines or associated gearing, and any other fire hazards. However, such extinguishers shall not be required if protection, at least equivalent to that required by this subparagraph, is provided in such spaces by a fixed fire-extinguishing system fitted in compliance with paragraph 4.1.

5.3.2.2 There shall be a sufficient number of portable foam extinguishers or equivalent which shall be so located that no point in the space is more than 10 m walking distance from an extinguisher and that there are at least two such extinguishers in each such space, except that such extinguishers shall not be required in addition to any provided in compliance with paragraph 5.1.2.2.

5.4 Other machinery spaces

Where, in the opinion of the Administration, a fire hazard exists in any machinery space for which no specific provisions for fire-extinguishing appliances are prescribed in paragraphs 5.1, 5.2 and 5.3, there shall be provided in, or adjacent to, that space such a number of approved portable fire extinguishers or other means of fire extinction as the Administration may deem sufficient.

5.5 Additional requirements for passenger ships In passenger ships carrying more than 36 passengers, each machinery space of category A shall be provided with at least two suitable water fog applicators.*

5.6 Fixed local application fire-fighting systems

5.6.1 Paragraph 5.6 shall apply to passenger ships of 500 gross tonnage and above and cargo ships of 2000 gross tonnage and above.

5.6.2 Machinery spaces of category A above 500 m³ in volume shall, in addition to the fixed fire-extinguishing system required in paragraph 5.1.1, be protected by an approved type of fixed water-based or equivalent local application fire-fighting system, based on the guidelines deve-

* A water fog applicator might consist of a metal L-shaped pipe, the long limb being about 2 m in length capable of being fitted to a fire hose and the short limb being about 250 mm in length fitted with a fixed water fog nozzle or capable of being fitted with a water spray nozzle.

loped by the Organization.* In the case of periodically unattended machinery spaces, the fire fighting system shall have both automatic and manual release capabilities. In the case of continuously manned machinery spaces, the fire-fighting system is only required to have a manual release capability.

5.6.3 Fixed local application fire-fighting systems are to protect areas such as the following without the necessity of engine shutdown, personnel evacuation, or sealing of the spaces:

- .1 the fire hazard portions of internal combustion machinery used for the ship's main propulsion and power generation;
- .2 boiler fronts;
- .3 the fire hazard portions of incinerators; and
- .4 purifiers for heated fuel oil.

5.6.4 Activation of any local application system shall give a visual and distinct audible alarm in the protected space and at continuously manned stations. The alarm shall indicate the specific system activated. The system alarm requirements described within this paragraph are in addition to, and not a substitute for, the detection and fire alarm system required elsewhere in this chapter.

6 Fire-extinguishing arrangements in control stations, accommodation and service spaces

6.1 Sprinkler systems in passenger ships

6.1.1 Passenger ships carrying more than 36 passengers shall be equipped with an automatic sprinkler, fire detection and fire alarm system of an approved type complying with the requirements of the Fire Safety Systems Code in all control stations, accommodation and service spaces, including corridors and stairways. Alternatively, control stations, where water may cause damage to essential equipment, may be fitted with an approved fixed fire-extinguishing system of another type. Spaces having little or no fire risk such as voids, public toilets, carbon dioxide rooms and similar spaces need not be fitted with an automatic sprinkler system.

6.1.2 In passenger ships carrying not more than 36 passengers, when a fixed smoke detection and fire alarm system complying with the provisions of the Fire Safety Systems Code is provided only in corridors, stairways and escape routes within accommodation spaces, an automatic sprinkler system shall be installed in accordance with regulation 7.5.3.2.

6.2 Sprinkler systems for cargo ships

In cargo ships in which method IIC specified in regulation 9.2.3.1.1.2 is adopted, an automatic sprinkler, fire detection and fire alarm system shall be fitted in accordance with the requirements in regulation 7.5.5.2.

* Refer to the Guidelines for the approval of fixed water-based local application fire-fighting systems for use in category A machinery spaces (MSC/Circ.913).

6.3 Spaces containing flammable liquid

6.3.1 Paint lockers shall be protected by:

- .1 a carbon dioxide system, designed to give a minimum volume of free gas equal to 40% of the gross volume of the protected space;
- .2 a dry powder system, designed for at least 0.5 kg powder/m³;
- .3 a water spraying or sprinkler system, designed for 5 l/m² min. Water spraying systems may be connected to the fire main of the ship; or
- .4 a system providing equivalent protection, as determined by the Administration.

In any case, the system shall be operable from outside the protected space.

6.3.2 Flammable liquid lockers shall be protected by an appropriate fire-extinguishing arrangement approved by the Administration.

6.3.3 For lockers of a deck area of less than 4 m², which do not give access to accommodation spaces, a carbon dioxide portable fire extinguisher sized to provide a minimum volume of free gas equal to 40% of the gross volume of the space may be accepted in lieu of a fixed system. A discharge port shall be arranged in the locker to allow the discharge of the extinguisher without having to enter into the protected space. The required portable fire extinguisher shall be stowed adjacent to the port. Alternatively, a port or hose connection may be provided to facilitate the use of fire main water.

6.4 Deep-fat cooking equipment

Deep-fat cooking equipment shall be fitted with the following:

- .1 an automatic or manual extinguishing system tested to an international standard acceptable to the Organization;*
- .2 a primary and backup thermostat with an alarm to alert the operator in the event of failure of either thermostat;
- .3 arrangements for automatically shutting off the electrical power upon activation of the extinguishing system;
- .4 an alarm for indicating operation of the extinguishing system in the galley where the equipment is installed; and
- .5 controls for manual operation of the extinguishing system which are clearly labelled for ready use by the crew.

7 Fire-extinguishing arrangements in cargo spaces

7.1 Fixed gas fire-extinguishing systems for general cargo

7.1.1 Except as provided for in paragraph 7.2, the cargo spaces of passenger ships of

1,000 gross tonnage and upwards shall be protected by a fixed carbon dioxide or inert gas fire-extinguishing system complying with the provi-

* Refer to the recommendations by the International Organization for Standardization, in particular, Publication ISO 15371:2000 on Fire-extinguishing systems for protection of galley deep-fat cooking equipment.

sions of the Fire Safety Systems Code or by a fixed high expansion foam fire-extinguishing system which gives equivalent protection.

7.1.2 Where it is shown to the satisfaction of the Administration that a passenger ship is engaged on voyages of such short duration that it would be unreasonable to apply the requirements of paragraph 7.1.1 and also in ships of less than 1,000 gross tonnage, the arrangements in cargo spaces shall be to the satisfaction of the Administration, provided that the ship is fitted with steel hatch covers and effective means of closing all ventilators and other openings leading to the cargo spaces.

7.1.3 Except for ro-ro and vehicle spaces, cargo spaces on cargo ships of 2,000 gross tonnage and upwards shall be protected by a fixed carbon dioxide or inert gas fire-extinguishing system complying with the provisions of the Fire Safety Systems Code, or by a fire-extinguishing system which gives equivalent protection.

7.1.4 The Administration may exempt from the requirements of paragraphs 7.1.3 and 7.2, cargo spaces of any cargo ship if constructed, and solely intended for, the carriage of ore, coal, grain, unseasoned timber, non-combustible cargoes or cargoes which, in the opinion of the Administration, constitute a low fire risk.* Such exemptions may be granted only if the ship is fitted with steel hatch covers and effective means of closing ventilators and other openings leading to the cargo spaces. When such exemptions are granted, the Administration shall issue an Exemption Certificate, irrespective of the date of construction of the ship concerned, in accordance with regulation I/12(a)(vi), and shall ensure that the list of cargoes the ship is permitted to carry is attached to the Exemption Certificate.

7.2 Fixed gas fire-extinguishing systems for dangerous goods

A ship engaged in the carriage of dangerous goods in any cargo spaces shall be provided with a fixed carbon dioxide or inert gas fire-extinguishing system complying with the provisions of the Fire Safety Systems Code or with a fire-extinguishing system which, in the opinion of the Administration, gives equivalent protection for the cargoes carried.

8 Cargo tank protection

8.1 Fixed deck foam systems

8.1.1 For tankers of 20,000 tonnes deadweight and upwards, a fixed deck foam system shall be provided in accordance with the requirements of the Fire Safety Systems Code, except that, in lieu of the above, the

* Refer to the Code of Safe Practice for Solid Bulk Cargoes – Emergency Schedule B14, entry for coal and to the List of solid bulk cargoes which are non-combustible or constitute a low fire risk or for which a fixed gas fire-extinguishing system is ineffective (MSC/Circ.671).

Administration, after having given consideration to the ship's arrangement and equipment, may accept other fixed installations if they afford protection equivalent to the above, in accordance with regulation I/5. The requirements for alternative fixed installations shall comply with the requirements in paragraph 8.1.2.

8.1.2 In accordance with paragraph 8.1.1, where the Administration accepts an equivalent fixed installation in lieu of the fixed deck foam system, the installation shall:

- .1 be capable of extinguishing spill fires and also preclude ignition of spilled oil not yet ignited; and
- .2 be capable of combating fires in ruptured tanks.

8.1.3 Tankers of less than 20,000 tonnes deadweight shall be provided with a deck foam system complying with the requirements of the Fire Safety Systems Code.

9 Protection of cargo pump rooms in tankers

9.1 Fixed fire-extinguishing systems

Each cargo pump-room shall be provided with one of the following fixed fire-extinguishing systems operated from a readily accessible position outside the pump-room. Cargo pump-rooms shall be provided with a system suitable for machinery spaces of category A.

9.1.1 A carbon dioxide system complying with the provisions of the Fire Safety Systems Code and with the following:

- .1 the alarms giving audible warning of the release of fire-extinguishing medium shall be safe for use in a flammable cargo vapour/air mixture; and
- .2 a notice shall be exhibited at the controls stating that due to the electrostatic ignition hazard, the system is to be used only for fire extinguishing and not for inerting purposes.

9.1.2 A high-expansion foam system complying with the provisions of the Fire Safety Systems Code, provided that the foam concentrate supply is suitable for extinguishing fires involving the cargoes carried.

9.1.3 A fixed pressure water-spraying system complying with the provisions of the Fire Safety Systems Code.

9.2 Quantity of fire-extinguishing medium

Where the extinguishing medium used in the cargo pump-room system is also used in systems serving other spaces, the quantity of medium provided or its delivery rate need not be more than the maximum required for the largest compartment.

10 Fire-fighter's outfits

10.1 Types of fire-fighter's outfits

Fire-fighter's outfits shall comply with the Fire Safety Systems Code.

10.2 Number of fire-fighter's outfits

10.2.1 Ships shall carry at least two fire-fighter's outfits.

10.2.2 In addition, in passenger ships there shall be provided:

- .1 for every 80 m, or part thereof, of the aggregate of the lengths of all passenger spaces and service spaces on the deck which

carries such spaces or, if there is more than one such deck, on the deck which has the largest aggregate of such lengths, two fire-fighter's outfits and, in addition, two sets of personal equipment, each set comprising the items stipulated in the Fire Safety Systems Code. In passenger ships carrying more than 36 passengers, two additional fire-fighter's outfits shall be provided for each main vertical zone. However, for stairway enclosures which constitute individual main vertical zones and for the main vertical zones in the fore or aft end of a ship which do not contain spaces of categories (6), (7), (8) or (12) defined in regulation 9.2.2.3, no additional fire-fighter's outfits are required; and

.2 ships carrying more than 36 passengers, for each pair of breathing apparatus there shall be provided one water fog applicator which shall be stored adjacent to such apparatus.

10.2.3 In addition, in tankers, two fire-fighter's outfits shall be provided.

10.2.4 The Administration may require additional sets of personal equipment and breathing apparatus, having due regard to the size and type of the ship.

10.2.5 Two spare charges shall be provided for each required breathing apparatus. Passenger ships carrying not more than 36 passengers and cargo ships that are equipped with suitably located means for fully recharging the air cylinders free from contamination, need carry only one spare charge for each required apparatus. In passenger ships carrying more than 36 passengers, at least two spare charges for each breathing apparatus shall be provided.

10.3 Storage of fire-fighter's outfits

10.3.1 The fire-fighter's outfits or sets of personal equipment shall be kept ready for use in an easily accessible location that is permanently and clearly marked and, where more than one fire-fighter's outfit or more than one set of personal equipment is carried, they shall be stored in widely separated positions.

10.3.2 In passenger ships, at least two fire-fighter's outfits and, in addition, one set of personal equipment shall be available at any one position. At least two fire-fighter's outfits shall be stored in each main vertical zone.

Regulation 11

Structural integrity

1 Purpose

The purpose of this regulation is to maintain structural integrity of the ship preventing partial or whole collapse of the ship structures due to strength deterioration by heat. For this purpose, materials used in the ships' structure shall ensure that the structural integrity is not degraded due to fire.

2. Material of hull, superstructures, structural bulkheads, decks and deckhouses

The hull, superstructures, structural bulkheads, decks and deckhouses shall be constructed of steel or other equivalent material. For the purpose of applying the definition of steel or other equivalent material as given in regulation 3.43 the “applicable fire exposure” shall be according to the integrity and insulation standards given in tables 9.1 to 9.4. For example, where divisions such as decks or sides and ends of deckhouses are permitted to have “B-0” fire integrity, the “applicable fire exposure” shall be half an hour.

3 Structure of aluminium alloy

Unless otherwise specified in paragraph 2, in cases where any part of the structure is of aluminium alloy, the following shall apply:

- .1 the insulation of aluminium alloy components of “A” or “B” class divisions, except structure which, in the opinion of the Administration, is non-load-bearing, shall be such that the temperature of the structural core does not rise more than 200°C above the ambient temperature at any time during the applicable fire exposure to the standard fire test; and
- .2 special attention shall be given to the insulation of aluminium alloy components of columns, stanchions and other structural members required to support lifeboat and liferaft stowage, launching and embarkation areas, and “A” and “B” class divisions to ensure:
 - .2.1 that for such members supporting lifeboat and liferaft areas and “A” class divisions, the temperature rise limitation specified in paragraph 3.1 shall apply at the end of one hour; and
 - .2.2 that for such members required to support “B” class divisions, the temperature rise limitation specified in paragraph 3.1 shall apply at the end of half an hour.

4 Machinery spaces of category A

4.1 Crowns and casings

Crowns and casings of machinery spaces of category A shall be of steel construction and shall be insulated as required by tables 9.5 and 9.7, as appropriate.

4.2 Floor plating

The floor plating of normal passageways in machinery spaces of category A shall be made of steel.

5 Materials of overboard fittings

Materials readily rendered ineffective by heat shall not be used for overboard scuppers, sanitary discharges, and other outlets which are close to the waterline and where the failure of the material in the event of fire would give rise to danger of flooding.

6 Protection of cargo tank structure against pressure or vacuum in tankers

6.1 General

The venting arrangements shall be so designed and operated as to ensure that neither pressure nor vacuum in cargo tanks shall exceed design parameters and be such as to provide for:

- .1 the flow of the small volumes of vapour, air or inert gas mixtures caused by thermal variations in a cargo tank in all cases through pressure/vacuum valves; and
- .2 the passage of large volumes of vapour, air or inert gas mixtures during cargo loading and ballasting, or during discharging.

6.2 Openings for small flow by thermal variations

Openings for pressure release required by paragraph 6.1.1 shall:

- .1 have as great a height as is practicable above the cargo tank deck to obtain maximum dispersal of flammable vapours, but in no case less than 2 m above the cargo tank deck; and
- .2 be arranged at the furthest distance practicable but not less than 5 m from the nearest air intakes and openings to enclosed spaces containing a source of ignition and from deck machinery and equipment which may constitute an ignition hazard. Anchor windlass and chain locker openings constitute an ignition hazard.

6.3 Safety measures in cargo tanks

6.3.1 Preventive measures against liquid rising in the venting system
Provisions shall be made to guard against liquid rising in the venting system to a height which would exceed the design head of cargo tanks. This shall be accomplished by high-level alarms or overflow control systems or other equivalent means, together with independent gauging devices and cargo tank filling procedures. For the purposes of this regulation, spill valves are not considered equivalent to an overflow system.

6.3.2 Secondary means for pressure/vacuum relief

A secondary means of allowing full flow relief of vapour, air or inert gas mixtures to prevent over-pressure or under-pressure in the event of failure of the arrangements in paragraph 6.1.2. Alternatively, pressure sensors may be fitted in each tank protected by the arrangement required in paragraph 6.1.2, with a monitoring system in the ship's cargo control room or the position from which cargo operations are normally carried out. Such monitoring equipment shall also provide an alarm facility which is activated by detection of over-pressure or under-pressure conditions within a tank.

6.3.3 Bypasses in vent mains

Pressure/vacuum valves required by paragraph 6.1.1 may be provided with a bypass arrangement when they are located in a vent main or mast-head riser. Where such an arrangement is provided there shall be suitable indicators to show whether the bypass is open or closed.

6.3.4 Pressure/vacuum-breaking devices

One or more pressure/vacuum-breaking devices shall be provided to prevent the cargo tanks from being subject to:

- .1 a positive pressure, in excess of the test pressure of the cargo tank, if the cargo were to be loaded at the maximum rated capacity and all other outlets are left shut; and
- .2 a negative pressure in excess of 700 mm water gauge if cargo were to be discharged at the maximum rated capacity of the cargo pumps and the inert gas blowers were to fail.

Such devices shall be installed on the inert gas main unless they are installed in the venting system required by regulation 4.5.3.1 or on individual cargo tanks. The location and design of the devices shall be in accordance with regulation 4.5.3 and paragraph 6.

6.4 Size of vent outlets

Vent outlets for cargo loading, discharging and ballasting required by paragraph 6.1.2 shall be designed on the basis of the maximum designed loading rate multiplied by a factor of at least 1.25 to take account of gas evolution, in order to prevent the pressure in any cargo tank from exceeding the design pressure. The master shall be provided with information regarding the maximum permissible loading rate for each cargo tank and in the case of combined venting systems, for each group of cargo tanks.

PART D

ESCAPE

Regulation 12

Notification of crew and passengers

1 Purpose

The purpose of this regulation is to notify crew and passengers of a fire for safe evacuation. For this purpose, a general emergency alarm system and a public address system shall be provided.

2. General emergency alarm system

A general emergency alarm system required by regulation III/6.4.2 shall be used for notifying crew and passengers of a fire.

3 Public address systems in passenger ships

A public address system or other effective means of communication complying with the requirements of regulation III/6.5 shall be available throughout the accommodation and service spaces and control stations and open decks.

Regulation 13

Means of escape

1 Purpose

The purpose of this regulation is to provide means of escape so that persons onboard can safely and swiftly escape to the lifeboat and liferaft embarkation deck. For this purpose, the following functional requirements shall be met:

- .1 safe escape routes shall be provided;
- .2 escape routes shall be maintained in a safe condition, clear of obstacles; and
- .3 additional aids for escape shall be provided as necessary to ensure accessibility, clear marking, and adequate design for emergency situations.

2. General requirements

2.1 Unless expressly provided otherwise in this regulation, at least two widely separated and ready means of escape shall be provided from all spaces or group of spaces.

2.1 Lifts shall not be considered as forming one of the means of escape as required by this regulation.

3 Means of escape from control stations, accommodation and service spaces

3.1 General requirements

3.1.1 Stairways and ladders shall be so arranged as to provide ready means of escape to the lifeboat and liferaft embarkation deck from passenger and crew accommodation spaces and from spaces in which the crew is normally employed, other than machinery spaces.

3.1.2 Unless expressly provided otherwise in this regulation, a corridor, lobby, or part of a corridor from which there is only one route of escape shall be prohibited. Dead-end corridors used in service areas which are necessary for the practical utility of the ship, such as fuel oil stations and athwartship supply corridors, shall be permitted, provided such dead-end corridors are separated from crew accommodation areas and are inaccessible from passenger accommodation areas. Also, a part of a corridor that has a depth not exceeding its width is considered a recess or local extension and is permitted.

3.1.3 All stairways in accommodation and service spaces and control stations shall be of steel frame construction except where the Administration sanctions the use of other equivalent material.

3.1.4 If a radiotelegraph station has no direct access to the open deck, two means of escape from or access to, the station shall be provided, one of which may be a porthole or window of sufficient size or other means to the satisfaction of the Administration.

3.1.5 Doors in escape routes shall, in general, open in-way of the direction of escape, except that:

- .1 individual cabin doors may open into the cabins in order to avoid injury to persons in the corridor when the door is opened; and
- .2 doors in vertical emergency escape trunks may open out of the trunk in order to permit the trunk to be used both for escape and for access.

3.2 Means of escape in passenger ships

3.2.1 Escape from spaces below the bulkhead deck

3.2.1.1 Below the bulkhead deck two means of escape, at least one of which shall be independent of watertight doors, shall be provided from each watertight compartment or similarly restricted space or group of spaces. Exceptionally, the Administration may dispense with one of the means of escape for crew spaces that are entered only occasionally, if the required escape route is independent of watertight doors.

3.2.1.2 Where the Administration has granted dispensation under the provisions of paragraph 3.2.1.1, this sole means of escape shall provide safe escape. However, stairways shall not be less than 800 mm in clear width with handrails on both sides.

3.2.2 Escape from spaces above the bulkhead deck

Above the bulkhead deck there shall be at least two means of escape from each main vertical zone or similarly restricted space or group of spaces at least one of which shall give access to a stairway forming a vertical escape.

3.2.3 Direct access to stairway enclosures

Stairway enclosures in accommodation and service spaces shall have direct access from the corridors and be of a sufficient area to prevent congestion, having in view the number of persons likely to use them in an emergency. Within the perimeter of such stairway enclosures, only public toilets, lockers of non-combustible material providing storage for nonhazardous safety equipment and open information counters are permitted. Only public spaces, corridors, lifts, public toilets, special category spaces and open ro-ro spaces to which any passengers carried can have access, other escape stairways required by paragraph 3.2.4.1 and external areas are permitted to have direct access to these stairway enclosures. Small corridors or "lobbies" used to separate an enclosed stairway from galleys or main laundries may have direct access to the stairway provided they have a minimum deck area of 4.5 m², a width of no less than 900 mm and contain a fire hose station.

3.2.4 Details of means of escape

3.2.4.1 At least one of the means of escape required by paragraphs 3.2.1.1 and 3.2.2 shall consist of a readily accessible enclosed stairway, which shall provide continuous fire shelter from the level of its origin to the appropriate lifeboat and liferaft embarkation decks, or to the uppermost weather deck if the embarkation deck does not extend to the main vertical zone being considered. In the latter case, direct access to the embarkation deck by way of external open stairways and passageways shall be provided and shall have emergency lighting in accordance with

regulation III/11.5 and slip-free surfaces underfoot. Boundaries facing external open stairways and passageways forming part of an escape route and boundaries in such a position that their failure during a fire would impede escape to the embarkation deck shall have fire integrity, including insulation values, in accordance with tables 9.1 to 9.4, as appropriate.

3.2.4.2 Protection of access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall be provided either directly or through protected internal routes which have fire integrity and insulation values for stairway enclosures as determined by tables 9.1 to 9.4, as appropriate.

3.2.4.3 Stairways serving only a space and a balcony in that space shall not be considered as forming one of the required means of escape.

3.2.4.4 Each level within an atrium shall have two means of escape, one of which shall give direct access to an enclosed vertical means of escape meeting the requirements of paragraph 3.2.4.1.

3.2.4.5 The widths, number and continuity of escapes shall be in accordance with the requirements in the Fire Safety Systems Code.

3.2.5 Marking of escape routes

3.2.5.1 In addition to the emergency lighting required by regulations II-1/42 and III/11.5, the means of escape, including stairways and exits, shall be marked by lighting or photoluminescent strip indicators placed not more than 300 mm above the deck at all points of the escape route including angles and intersections. The marking must enable passengers to identify the routes of escape and readily identify the escape exits. If electric illumination is used, it shall be supplied by the emergency source of power and it shall be so arranged that the failure of any single light or cut in a lighting strip will not result in the marking being ineffective. Additionally, escape route signs and fire equipment location markings shall be of photoluminescent material or marked by lighting. The Administration shall ensure that such lighting or photoluminescent equipment has been evaluated, tested and applied in accordance with the Fire Safety Systems Code.

3.2.5.2 In passenger ships carrying more than 36 passengers, the requirements of the paragraph 3.2.5.1 shall also apply to the crew accommodation areas.

3.2.6 Normally locked doors that form part of an escape route

3.2.6.1 Cabin and stateroom doors shall not require keys to unlock them from inside the room. Neither shall there be any doors along any designated escape route which require keys to unlock them when moving in the direction of escape.

3.2.6.2 Escape doors from public spaces that are normally latched shall be fitted with a means of quick release. Such means shall consist of a door-latching mechanism incorporating a device that releases the latch upon the application of a force in the direction of escape flow. Quick release mechanisms shall be designed and installed to the satisfaction of the Administration and, in particular:

- .1 consist of bars or panels, the actuating portion of which extends across at least one half of the width of the door leaf, at least 760 mm and not more than 1120 mm above the deck;
- .2 cause the latch to release when a force not exceeding 67 N is applied; and
- .3 not be equipped with any locking device, set screw or other arrangement that prevents the release of the latch when pressure is applied to the releasing device.

3.3 Means of escape in cargo ships

3.3.1 General

At all levels of accommodation there shall be provided at least two widely separated means of escape from each restricted space or group of spaces.

3.3.2 Escape from spaces below the lowest open deck

Below the lowest open deck the main means of escape shall be a stairway and the second escape may be a trunk or a stairway.

3.3.3 Escape from spaces above the lowest open deck

Above the lowest open deck the means of escape shall be stairways or doors to an open deck or a combination thereof.

3.3.4 Dead-end corridors

No dead-end corridors having a length of more than 7 m shall be accepted.

3.3.5 Width and continuity of escape routes

The width, number and continuity of escape routes shall be in accordance with the requirements in the Fire Safety Systems Code.

3.3.6 Dispensation from two means of escape

Exceptionally the Administration may dispense with one of the means of escape, for crew spaces that are entered only occasionally, if the required escape route is independent of watertight doors.

3.4 Emergency escape breathing devices*

3.4.1 Emergency escape breathing devices shall comply with the Fire Safety Systems Code. Spare emergency escape breathing devices shall be kept onboard.

3.4.2 All ships shall carry at least two emergency escape breathing devices within accommodation spaces.

3.4.3 In passenger ships, at least two emergency escape breathing devices shall be carried in each main vertical zone.

3.4.4 In passenger ships carrying more than 36 passengers, two emergency escape breathing devices, in addition to those required in paragraph 3.4.3 above, shall be carried in each main vertical zone.

3.4.5 However, paragraphs 3.4.3 and 3.4.4 do not apply to stairway enclosures which constitute individual main vertical zones and for the main vertical zones in the fore or aft end of a ship which do not contain spaces of categories (6), (7), (8) or (12) defined in Regulation 9.2.2.3.

* Refer to the Guidelines for the performance, location, use and care of emergency escape breathing devices (MSC/Circ.849).

4 Means of escape from machinery spaces

4.1 Means of escape on passenger ships

Means of escape from each machinery space in passenger ships shall comply with the following provisions.

4.1.1 Escape from spaces below the bulkhead deck

Where the space is below the bulkhead deck the two means of escape shall consist of either:

- .1 two sets of steel ladders as widely separated as possible, leading to doors in the upper part of the space similarly separated and from which access is provided to the appropriate lifeboat and liferaft embarkation decks. One of these ladders shall be located within a protected enclosure that satisfies Regulation 9.2.2.3, category (2), or regulation 9.2.2.4, category (4), as appropriate, from the lower part of the space it serves to a safe position outside the space. Self-closing fire doors of the same fire integrity standards shall be fitted in the enclosure. The ladder shall be fixed in such a way that heat is not transferred into the enclosure through non-insulated fixing points. The protected enclosure shall have minimum internal dimensions of at least 800 mm x 800 mm, and shall have emergency lighting provisions; or
- .2 one steel ladder leading to a door in the upper part of the space from which access is provided to the embarkation deck and additionally, in the lower part of the space and in a position well separated from the ladder referred to, a steel door capable of being operated from each side and which provides access to a safe escape route from the lower part of the space to the embarkation deck.

4.1.2 Escape from spaces above the bulkhead deck

Where the space is above the bulkhead deck, the two means of escape shall be as widely separated as possible and the doors leading from such means of escape shall be in a position from which access is provided to the appropriate lifeboat and liferaft embarkation decks. Where such means of escape require the use of ladders, these shall be of steel.

4.1.3 Dispensation from two means of escape

In a ship of less than 1,000 gross tonnage, the Administration may dispense with one of the means of escape, due regard being paid to the width and disposition of the upper part of the space. In a ship of 1,000 gross tonnage and above, the Administration may dispense with one means of escape from any such space, including a normally unattended auxiliary machinery space, so long as either a door or a steel ladder provides a safe escape route to the embarkation deck, due regard being paid to the nature and location of the space and whether persons are normally employed in that space. In the steering gear space, a second means of escape shall be provided when the emergency steering position is located in that space unless there is direct access to the open deck.

4.1.4 Escape from machinery control rooms

Two means of escape shall be provided from a machinery control room located within a machinery space, at least one of which will provide continuous fire shelter to a safe position outside the machinery space.

4.2 Means of escape on cargo ships

Means of escape from each machinery space in cargo ships shall comply with the following provisions.

4.2.1 Escape from machinery spaces of category A

Except as provided in paragraph 4.2.2, two means of escape shall be provided from each machinery space of category A. In particular, one of the following provisions shall be complied with:

- .1 two sets of steel ladders as widely separated as possible leading to doors in the upper part of the space similarly separated and from which access is provided to the open deck. One of these ladders shall be located within a protected enclosure that satisfies regulation 9.2.3.3, category (4), from the lower part of the space it serves to a safe position outside the space. Self-closing fire doors of the same fire integrity standards shall be fitted in the enclosure. The ladder shall be fixed in such a way that heat is not transferred into the enclosure through non-insulated fixing points. The enclosure shall have minimum internal dimensions of at least 800 mm x 800 mm, and shall have emergency lighting provisions; or
- .2 one steel ladder leading to a door in the upper part of the space from which access is provided to the open deck and, additionally, in the lower part of the space and in a position well separated from the ladder referred to, a steel door capable of being operated from each side and which provides access to a safe escape route from the lower part of the space to the open deck.

4.2.2 Dispensation from two means of escape

In a ship of less than 1,000 gross tonnage, the Administration may dispense with one of the means of escape required under paragraph 4.2.1, due regard being paid to the dimension and disposition of the upper part of the space. In addition, the means of escape from machinery spaces of category A need not comply with the requirement for an enclosed fire shelter listed in paragraph 4.2.1.1. In the steering gear space, a second means of escape shall be provided when the emergency steering position is located in that space unless there is direct access to the open deck.

4.2.3 Escape from machinery spaces other than those of category A

From machinery spaces other than those of category A, two escape routes shall be provided except that a single escape route may be accepted for spaces that are entered only occasionally, and for spaces where the maximum travel distance to the door is 5 m or less.

4.3 Emergency escape breathing devices

4.3.1 On all ships, within the machinery spaces, emergency escape breathing devices shall be situated ready for use at easily visible places, which can be reached quickly and easily at any time in the event of fire. The location of emergency escape breathing devices shall take into account the layout of the machinery space and the number of persons normally working in the spaces.*

4.3.2 The number and location of these devices shall be indicated in the fire control plan required in regulation 15.2.4.

4.3.3 Emergency escape breathing devices shall comply with the Fire Safety Systems Code.

5 Means of escape on passenger ships from special category and open ro-ro spaces to which any passengers carried can have access

5.1 In special category and open ro-ro spaces to which any passengers carried can have access, the number and locations of the means of escape both below and above the bulkhead deck shall be to the satisfaction of the Administration and, in general, the safety of access to the embarkation deck shall be at least equivalent to that provided for under paragraphs 3.2.1.1, 3.2.2, 3.2.4.1 and 3.2.4.2. Such spaces shall be provided with designated walkways to the means of escape with a breadth of at least 600 mm. The parking arrangements for the vehicles shall maintain the walkways clear at all times.

5.2 One of the escape routes from the machinery spaces where the crew is normally employed shall avoid direct access to any special category space.

6 Means of escape from ro-ro spaces

At least two means of escape shall be provided in ro-ro spaces where the crew are normally employed. The escape routes shall provide a safe escape to the lifeboat and liferaft embarkation decks and shall be located at the fore and aft ends of the space.

7 Additional requirements for ro-ro passenger ships

7.1 General

7.1.1 Escape routes shall be provided from every normally occupied space on the ship to an assembly station. These escape routes shall be arranged so as to provide the most direct route possible to the assembly station,** and shall be marked with symbols based on the guidelines developed by the Organization.***

* Refer to the Guidelines for the performance, location, use and care of emergency escape breathing devices (MSC/Circ.849).

** Refer to the Indication of the "assembly stations" in passenger ships (MSC/Circ.777)

*** Refer to the Symbols related to life-saving appliances and arrangements adopted by the Organization by resolution A.760(18).

7.1.2 The escape route from cabins to stairway enclosures shall be as direct as possible, with a minimum number of changes in direction. It shall not be necessary to cross from one side of the ship to the other to reach an escape route. It shall not be necessary to climb more than two decks up or down in order to reach an assembly station or open deck from any passenger space.

7.1.3 External routes shall be provided from open decks, as referred to in paragraph 7.1.2, to the survival craft embarkation stations.

7.1.4 Where enclosed spaces adjoin an open deck, openings from the enclosed space to the open deck shall, where practicable, be capable of being used as an emergency exit.

7.1.5 Escape routes shall not be obstructed by furniture and other obstructions. With the exception of tables and chairs which may be cleared to provide open space, cabinets and other heavy furnishings in public spaces and along escape routes shall be secured in place to prevent shifting if the ship rolls or lists. Floor coverings shall also be secured in place. When the ship is underway, escape routes shall be kept clear of obstructions such as cleaning carts, bedding, luggage and boxes of goods.

7.2 Instruction for safe escape

7.2.1 Decks shall be sequentially numbered, starting with "1" at the tank top or lowest deck. The numbers shall be prominently displayed at stair landings and lift lobbies. Decks may also be named, but the deck number shall always be displayed with the name.

7.2.2 Simple "mimic" plans showing the "you are here" position and escape routes marked by arrows, shall be prominently displayed on the inside of each cabin door and in public spaces. The plan shall show the directions of escape and shall be properly oriented in relation to its position on the ship.

7.3 Strength of handrails and corridors

7.3.1 Handrails or other handholds shall be provided in corridors along the entire escape route so that a firm handhold is available at every step of the way, where possible, to the assembly stations and embarkation stations. Such handrails shall be provided on both sides of longitudinal corridors more than 1.8 m in width and transverse corridors more than 1 m in width. Particular attention shall be paid to the need to be able to cross lobbies, atriums and other large open spaces along escape routes. Handrails and other handholds shall be of such strength as to withstand a distributed horizontal load of 750 N/m applied in the direction of the centre of the corridor or space, and a distributed vertical load of 750 N/m applied in the downward direction. The two loads need not be applied simultaneously.

7.3.2 The lowest 0.5 m of bulkheads and other partitions forming vertical divisions along escape routes shall be able to sustain a load of 750 N/m to allow them to be used as walking surfaces from the side of the escape route with the ship at large angles of heel.

7.4 Evacuation analysis*

Escape routes shall be evaluated by an evacuation analysis early in the design process. The analysis shall be used to identify and eliminate, as far as practicable, congestion which may develop during an abandonment, due to normal movement of passengers and crew along escape routes, including the possibility that crew may need to move along these routes in a direction opposite the movement of passengers. In addition, the analysis shall be used to demonstrate that escape arrangements are sufficiently flexible to provide for the possibility that certain escape routes, assembly stations, embarkation stations or survival craft may not be available as a result of a casualty.

PART E

OPERATIONAL REQUIREMENTS

Regulation 14

Operational readiness and maintenance

1 Purpose

The purpose of this regulation is to maintain and monitor the effectiveness of the fire safety measures the ship is provided with. For this purpose, the following functional requirements shall be met:

- .1 fire protection systems and fire-fighting systems and appliances shall be maintained ready for use; and
- .2 fire protection systems and fire-fighting systems and appliances shall be properly tested and inspected.

2. General requirements

At all times while the ship is in service, the requirements of paragraph 1.1 shall be complied with. A ship is not in service when:

- .1 it is in for repairs or lay-up (either at anchor or in port) or in dry-dock;
- .2 it is declared not in service by the owner or the owner's representative; and
- .3 in the case of passenger ships, there are no passengers on board.

2.1 Operational readiness

2.1.1 The following fire protection systems shall be kept in good order so as to ensure their required performance if a fire occurs:

- .1 structural fire protection including fire resisting divisions, and protection of openings and penetrations in these divisions;
- .2 fire detection and fire alarm systems; and
- .3 means of escape systems and appliances.

* Refer to the Interim Guidelines for a simplified evacuation analysis of ro-ro passenger ships (MSC/Circ.909).

2.1.2 Fire-fighting systems and appliances shall be kept in good working order and readily available for immediate use. Portable extinguishers which have been discharged shall be immediately recharged or replaced with an equivalent unit.

2.2 Maintenance, testing and inspections

2.2.1 Maintenance, testing and inspections shall be carried out based on the guidelines developed by the Organization* and in a manner having due regard to ensuring the reliability of fire-fighting systems and appliances.

2.2.2 The maintenance plan shall be kept on board the ship and shall be available for inspection whenever required by the Administration.

2.2.3 The maintenance plan shall include at least the following fire protection systems and fire-fighting systems and appliances, where installed:

- .1 fire mains, fire pumps and hydrants including hoses, nozzles and international shore connections;
- .2 fixed fire detection and fire alarm systems;
- .3 fixed fire-extinguishing systems and other fire extinguishing appliances;
- .4 automatic sprinkler, fire detection and fire alarm systems;
- .5 ventilation systems including fire and smoke dampers, fans and their controls;
- .6 emergency shut down of fuel supply;
- .7 fire doors including their controls;
- .8 general emergency alarm systems;
- .9 emergency escape breathing devices;
- .10 portable fire extinguishers including space charges; and
- .11 fire-fighter's outfits.

2.2.4 The maintenance programme may be computer-based.

3 Additional requirements for passenger ships

In addition to the fire protection systems and appliances listed in paragraph 2.2.3, ships carrying more than 36 passengers shall develop a maintenance plan for low-location lighting and public address systems.

4 Additional requirements for tankers

In addition to the fire protection systems and appliances listed in paragraph 2.2.3, tankers shall develop a maintenance plan for:

- .1 inert gas systems;
- .2 deck foam systems;
- .3 fire safety arrangements in cargo pump rooms; and
- .4 flammable gas detectors.

* Refer to the Guidelines on maintenance and inspection of fire protection systems and appliances (MSC/Circ.850).

Regulation 15

Instructions, onboard training and drills

1 Purpose

The purpose of this regulation is to mitigate the consequences of fire by means of proper instructions for training and drills of persons onboard in correct procedures under emergency conditions. For this purpose, the crew shall have the necessary knowledge and skills to handle fire emergency cases, including passenger care.

2. General requirements

2.1 Instructions, duties and organization

2.1.1 Crew members shall receive instruction on fire safety onboard the ship.

2.1.2 Crew members shall receive instructions on their assigned duties.

2.1.3 Parties responsible for fire-extinguishing shall be organized. These parties shall have the capability to complete their duties at all times while the ship is in service.

2.2 Onboard training and drills

2.2.1 Crew members shall be trained to be familiar with the arrangements of the ship as well as the location and operation of any fire-fighting systems and appliances that they may be called upon to use.

2.2.2 Training in the use of the emergency escape breathing devices shall be considered as part of on board training.

2.2.3 Performance of crew members assigned fire-fighting duties shall be periodically evaluated by conducting onboard training and drills to identify areas in need of improvement, to ensure competency in fire-fighting skills is maintained, and to ensure the operational readiness of the fire-fighting organization.

2.2.4 Onboard training in the use of the ship's fire-extinguishing systems and appliances shall be planned and conducted in accordance with provisions of regulation III/19.4.1.

2.2.5 Fire drills shall be conducted and recorded in accordance with the provisions of regulations III/19.3 and III/19.5.

2.3 Training manuals

2.3.1 A training manual shall be provided in each crew mess room and recreation room or in each crew cabin.

2.3.2 The training manual shall be written in the working language of the ship.

2.3.3 The training manual, which may comprise several volumes, shall contain the instructions and information required in paragraph 2.3.4 in easily understood terms and illustrated wherever possible. Any part of such information may be provided in the form of audio-visual aides in lieu of the manual.

2.3.4 The training manual shall explain the following in detail:

- .1 general fire safety practice and precautions related to the dan-

gers of smoking, electrical hazards, flammable liquids and similar common shipboard hazards;

- .2 general instructions on fire-fighting activities and fire-fighting procedures including procedures for notification of a fire and use of manually operated call points;
- .3 meanings of the ship's alarms;
- .4 operation and use of fire-fighting systems and appliances;
- .5 operation and use of fire doors;
- .6 operation and use of fire and smoke dampers; and
- .7 escape systems and appliances.

2.4 Fire control plans*

2.4.1 General arrangement plans shall be permanently exhibited for the guidance of the ship's officers, showing clearly for each deck the control stations, the various fire sections enclosed by "A" class divisions, the sections enclosed by "B" class divisions together with particulars of the fire detection and fire alarm systems, the sprinkler installation, the fire-extinguishing appliances, means of access to different compartments, decks, etc., and the ventilating system including particulars of the fan control positions, the position of dampers and identification numbers of the ventilating fans serving each section. Alternatively, at the discretion of the Administration, the aforementioned details may be set out in a booklet, a copy of which shall be supplied to each officer, and one copy shall at all times be available on board in an accessible position. Plans and booklets shall be kept up to date; any alterations thereto shall be recorded as soon as practicable. Description in such plans and booklets shall be in the language or languages required by the Administration. If the language is neither English nor French, a translation into one of those languages shall be included.

2.4.2 A duplicate set of fire control plans or a booklet containing such plans shall be permanently stored in a prominently marked weathertight enclosure outside the deckhouse for the assistance of shore-side fire-fighting personnel.**

3 Additional requirements for passenger ships

3.1 Fire drills

In addition to the requirement of paragraph 2.2.3, fire drills shall be conducted in accordance with the provisions of regulation III/30 having due regard to notification of passengers and movement of passengers to assembly stations and embarkation decks.

3.2 Fire control plans

In ships carrying more than 36 passengers, plans and booklets requi-

* Refer to the Graphical symbols for fire control plans, adopted by the Organization by resolution A.654(16).

** Refer to the Guidance concerning the location of fire control plans for assistance of shoreside fire-fighting personnel (MSC/Circ.451).

red by this regulation shall provide information regarding fire protection, fire detection and fire extinction based on the guidelines issued by the Organization.*

Regulation 16

Operations

1 Purpose

The purpose of this regulation is to provide information and instructions for proper ship and cargo handling operations in relation to fire safety. For this purpose, the following functional requirements shall be met:

- .1 fire safety operational booklets shall be provided on board; and
- .2 flammable vapour releases from cargo tank venting shall be controlled.

2. Fire safety operational booklets

2.1 The required fire safety operational booklet shall contain the necessary information and instructions for the safe operation of the ship and cargo handling operations in relation to fire safety. The booklet shall include information concerning the crew's responsibilities for the general fire safety of the ship while loading and discharging cargo and while underway. Necessary fire safety precautions for handling general cargoes shall be explained. For ships carrying dangerous goods and flammable bulk cargoes, the fire safety operational booklet shall also provide reference to the pertinent fire-fighting and emergency cargo handling instructions contained in the Code of Safe Practice for Solid Bulk Cargoes, the International Bulk Chemical Code, the International Gas Carrier Code and the International Maritime Dangerous Goods Code, as appropriate.

2.2 The fire safety operational booklet shall be provided in each crew mess room and recreation room or in each crew cabin.

2.3 The fire safety operational booklet shall be written in the working language of the ship.

2.4 The fire safety operational booklet may be combined with the training manuals required in regulation 15.2.3.

3 Additional requirements for tankers

3.1 General

The fire safety operational booklet referred to in paragraph 2 shall include provisions for preventing fire spread to the cargo area due to ignition of flammable vapours and include procedures of cargo tank gas-purging and/or gas-freeing taking into account the provisions in paragraph 3.2.

* Refer to the Guidelines on the information to be provided with fire control plans and booklets required by SOLAS regulations II-2/20 and 41-2, adopted by the Organization by resolution A.756(18).

3.2 Procedures for cargo tank purging and/or gas-freeing

3.2.1 When the ship is provided with an inert gas system, the cargo tanks shall first be purged in accordance with the provisions of regulation 4.5.6 until the concentration of hydrocarbon vapours in the cargo tanks has been reduced to less than 2% by volume. Thereafter, gas-freeing may take place at the cargo tank deck level.

3.2.2 When the ship is not provided with an inert gas system, the operation shall be such that the flammable vapour is discharged initially through:

- .1 the vent outlets as specified in regulation 4.5.3.4;
- .2 outlets at least 2 m above the cargo tank deck level with a vertical efflux velocity of at least 30 m/s maintained during the gas-freeing operation; or
- .3 outlets at least 2 m above the cargo tank deck level with a vertical efflux velocity of at least 20 m/s and which are protected by suitable devices to prevent the passage of flame.

3.2.3 The above outlets shall be located not less than 10 m measured horizontally from the nearest air intakes and openings to enclosed spaces containing a source of ignition and from deck machinery, which may include anchor windlass and chain locker openings, and equipment which may constitute an ignition hazard.

3.2.4 When the flammable vapour concentration at the outlet has been reduced to 30% of the lower flammable limit, gas-freeing may be continued at cargo tank deck level.

PART F

ALTERNATIVE DESIGN AND ARRANGEMENTS

Regulation 17

Alternative design and arrangements

1 Purpose

The purpose of this regulation is to provide a methodology for alternative design and arrangements for fire safety.

2 General

2.1 Fire safety design and arrangements may deviate from the prescriptive requirements set out in parts B, C, D, E or G, provided that the design and arrangements meet the fire safety objectives and the functional requirements.

2.2 When fire safety design or arrangements deviate from the prescriptive requirements of this chapter, engineering analysis, evaluation and approval of the alternative design and arrangements shall be carried out in accordance with this regulation.

3 Engineering analysis

The engineering analysis shall be prepared and submitted to the Administration, based on the guidelines developed by the Organization* and shall include, as a minimum, the following elements:

- .1 determination of the ship type and space(s) concerned;
- .2 identification of prescriptive requirement(s) with which the ship or the space(s) will not comply;
- .3 identification of the fire and explosion hazards of the ship or the space(s) concerned;
 - .3.1 identification of the possible ignition sources;
 - .3.2 identification of the fire growth potential of each space concerned;
 - .3.3 identification of the smoke and toxic effluent generation potential for each space concerned;
 - .3.4 identification of the potential for the spread of fire, smoke or of toxic effluents from the space(s) concerned to other spaces;
- .4 determination of the required fire safety performance criteria for the ships or the space(s) concerned addressed by the prescriptive requirement(s);
 - .4.1 performance criteria shall be based on the fire safety objectives and on the functional requirements of this chapter;
 - .4.2 performance criteria shall provide a degree of safety not less than that achieved by using the prescriptive requirements; and
 - .4.3 performance criteria shall be quantifiable and measurable;
- .5 detailed description of the alternative design and arrangements, including a list of the assumptions used in the design and any proposed operational restrictions or conditions; and
- .6 technical justification demonstrating that the alternative design and arrangements meet the required fire safety performance criteria.

4 Evaluation of the alternative design and arrangements

4.1 The engineering analysis required in paragraph 3 shall be evaluated and approved by the Administration taking into account the guidelines developed by the Organization.*

4.2 A copy of the documentation, as approved by the Administration, indicating that the alternative design and arrangements comply with this regulation shall be carried onboard the ship.

5 Exchange of information

The Administration shall communicate to the Organization pertinent information concerning alternative design and arrangements approved by them for circulation to all contracting governments.

* Refer to the Guidelines to be developed by the Organization.

6 Re-evaluation due to change of conditions

If the assumptions, and operational restrictions that were stipulated in the alternative design and arrangements are changed, the engineering analysis shall be carried out under the changed condition and shall be approved by the Administration.

PART G

SPECIAL REQUIREMENTS

Regulation 18

Helicopter facilities

1 Purpose

The purpose of this regulation is to provide additional measures in order to address the fire safety objectives of this chapter for ships fitted with special facilities for helicopters. For this purpose, the following functional requirements shall be met:

- .1 helideck structure must be adequate to protect the ship from the fire hazards associated with helicopter operations;
- .2 fire fighting appliances shall be provided to adequately protect the ship from the fire hazards associated with helicopter operations;
- .3 refuelling and hangar facilities and operations shall provide the necessary measures to protect the ship from the fire hazards associated with helicopter operations; and
- .4 operation manuals and training shall be provided.

2. Application

2.1 In addition to complying with the requirements of regulations in parts B, C, D and E, as appropriate, ships equipped with helidecks shall comply with the requirements of this Regulation.

2.2 Where helicopters land or conduct winching operations on an occasional or emergency basis on ships without helidecks, fire-fighting equipment fitted in accordance with the requirements in Part C may be used. This equipment shall be made readily available in close proximity to the landing or winching areas during helicopter operations.

2.3 Notwithstanding the requirements of paragraph 2.2 above, ro-ro passenger ships without helidecks shall comply with regulation III/28.

3 Structure

3.1 Construction of steel or other equivalent material

In general, the construction of the helidecks shall be of steel or other equivalent materials. If the helideck forms the deckhead of a deckhouse or superstructure, it shall be insulated to "A-60" class standard.

3.2 Construction of aluminium or other low melting point metals

If the Administration permits aluminium or other low melting point metal construction that is not made equivalent to steel, the following provisions shall be satisfied:

- .1 if the platform is cantilevered over the side of the ship, after each fire on the ship or on the platform, the platform shall undergo a structural analysis to determine its suitability for further use; and
- .2 if the platform is located above the ship's deckhouse or similar structure, the following conditions shall be satisfied:
 - .2.1 the deckhouse top and bulkheads under the platform shall have no openings;
 - .2.2 windows under the platform shall be provided with steel shutters; and
 - .2.3 after each fire on the platform or in close proximity, the platform shall undergo a structural analysis to determine its suitability for further use.

4 Means of escape

A helideck shall be provided with both a main and an emergency means of escape and access for fire fighting and rescue personnel. These shall be located as far apart from each other as is practicable and preferably on opposite sides of the helideck.

5 Fire-fighting appliances

5.1 In close proximity to the helideck, the following fire-fighting appliances shall be provided and stored near the means of access to that helideck:

- .1 at least two dry powder extinguishers having a total capacity of not less than 45 kg;
- .2 carbon dioxide extinguishers of a total capacity of not less than 18 kg or equivalent;
- .3 a suitable foam application system consisting of monitors or foam making branch pipes capable of delivering foam to all parts of the helideck in all weather conditions in which helicopters can operate. The system shall be capable of delivering a discharge rate as required in table 18.1 for at least five minutes;

Table 18.1 – Foam discharge rates

Category	Helicopter overall length	Discharge rate foam solution (l/min.)
H1	up to but not including 15m	250
H2	from 15m up to but not including 24m	500
H3	from 24m up to but not including 35m	800

- .4 the principal agent shall be suitable for use with salt water and conform to performance standards not inferior to those acceptable to the Organization;*
- .5 at least two nozzles of an approved dual-purpose type (jet/spray) and hoses sufficient to reach any part of the helideck;
- .6 in addition to the requirements of regulation 10.10, two sets of fire-fighter's outfits; and
- .7 at least the following equipment shall be stored in a manner that provides for immediate use and protection from the elements:
 - adjustable wrench;
 - blanket, fire resistant;
 - cutters, bolt 60 cm;
 - hook, grab or salving;
 - hacksaw, heavy duty complete with 6 spare blades;
 - ladder;
 - lift line 5 mm diameter and 15 m in length;
 - pliers, side cutting;
 - set of assorted screwdrivers; and
 - harness knife complete with sheath.

6 Drainage facilities

Drainage facilities in way of helidecks shall be constructed of steel and shall lead directly overboard independent of any other system and shall be designed so that drainage does not fall onto any part of the ship.

7 Helicopter refuelling and hangar facilities

Where the ship has helicopter refuelling and hangar facilities, the following requirements shall be complied with:

- .1 a designated area shall be provided for the storage of fuel tanks which shall be:
 - .1.1 as remote as is practicable from accommodation spaces, escape routes and embarkation stations; and
 - .1.2 isolated from areas containing a source of vapour ignition;
- .2 the fuel storage area shall be provided with arrangements whereby fuel spillage may be collected and drained to a safe location;
- .3 tanks and associated equipment shall be protected against physical damage and from a fire in an adjacent space or area;
- .4 where portable fuel storage tanks are used, special attention shall be given to:
 - .4.1 design of the tank for its intended purpose;
 - .4.2 mounting and securing arrangements;
 - .4.3 electric bonding; and
 - .4.4 inspection procedures;
- .5 storage tank fuel pumps shall be provided with means which

* Refer to the International Civil Aviation Organization Airport Services Manual, part 1 – Rescue and Fire fighting, Chapter 8 – Extinguishing Agent Characteristics, Paragraph 8.1.5 - Foam Specifications Table 8-1, Level 'B'.

- permit shutdown from a safe remote location in the event of a fire. Where a gravity fuelling system is installed, equivalent closing arrangements shall be provided to isolate the fuel source;
- .6 the fuel pumping unit shall be connected to one tank at a time. The piping between the tank and the pumping unit shall be of steel or equivalent material, as short as possible, and protected against damage;
 - .7 electrical fuel pumping units and associated control equipment shall be of a type suitable for the location and potential hazards;
 - .8 fuel pumping units shall incorporate a device which will prevent over-pressurization of the delivery or filling hose;
 - .9 equipment used in refuelling operations shall be electrically bonded;
 - .10 “NO SMOKING” signs shall be displayed at appropriate locations;
 - .11 hangar, refuelling and maintenance facilities shall be treated as category ‘A’ machinery spaces with regard to structural fire protection, fixed fire-extinguishing and detection system requirements;
 - .12 enclosed hangar facilities or enclosed spaces containing refuelling installations shall be provided with mechanical ventilation, as required by Regulation 20.3 for closed ro-ro spaces of cargo ships. Ventilation fans shall be of non-sparking type; and
 - .13 electric equipment and wiring in enclosed hangar or enclosed spaces containing refuelling installations shall comply with regulations 20.3.2, 20.3.3 and 20.3.4.

8 Operations manual and fire-fighting service

8.1 Each helicopter facility shall have an operations manual, including a description and a checklist of safety precautions, procedures and equipment requirements. This manual may be part of the ship’s emergency response procedures.

8.2 The procedures and precautions to be followed during refuelling operations shall be in accordance with recognized safe practices and contained in the operations manual.

8.3 Fire-fighting personnel consisting of at least two persons trained for rescue and fire-fighting duties and fire-fighting equipment shall be immediately available at all times when helicopter operations are expected.

8.4 Fire-fighting personnel shall be present during refuelling operations. However, the fire-fighting personnel shall not be involved with refuelling activities.

8.5 On-board refresher training shall be carried out and additional supplies of fire-fighting media shall be provided for training and testing of the equipment.

Regulation 19

*Carriage of dangerous goods**

1 Purpose

The purpose of this regulation is to provide additional safety measures in order to address the fire safety objectives of this chapter for ships carrying dangerous goods. For this purpose, the following functional requirements shall be met:

- .1 fire protection systems shall be provided to protect the ship from the added fire hazards associated with carriage of dangerous goods;
- .2 dangerous goods shall be adequately separated from ignition sources; and
- .3 appropriate personnel protective equipment shall be provided for the hazards associated with the carriage of dangerous goods.

2. General requirements

2.1 In addition to complying with the requirements of regulations in parts B, C, D, E and Regulations 18 and 20**, as appropriate, ship types and cargo spaces, referred to in paragraph 2.2, intended for the carriage of dangerous goods shall comply with the requirements of this Regulation, as appropriate, except when carrying dangerous goods in limited quantities*** unless such requirements have already been met by compliance with the requirements elsewhere in this chapter. The types of ships and modes of carriage of dangerous goods are referred to in paragraph 2.2 and in table 19.1. Cargo ships of less than 500 gross tonnage shall comply with this regulation, but Administrations may reduce the requirements and such reduced requirements shall be recorded in the document of compliance referred to in paragraph 4.

2.2 The following ship types and cargo spaces shall govern the application of tables 19.1 and 19.2:

- .1 ships and cargo spaces not specifically designed for the carriage of freight containers, but intended for the carriage of dangerous goods in packaged form including goods in freight containers and portable tanks;
- .2 purpose-built container ships and cargo spaces intended for the carriage of dangerous goods in freight containers and portable tanks;
- .3 ro-ro ships and ro-ro spaces intended for the carriage of dangerous goods;
- .4 ships and cargo spaces intended for the carriage of solid dangerous goods in bulk; and

* Refer to the Interim guidelines for open-top containerships (MSC/Circ.608/Rev.1).

** Refer to part 7 of the International Maritime Dangerous Goods Code.

*** Refer to chapter 3.4 of the International Maritime Dangerous Goods Code.

- .5 ships and cargo spaces intended for carriage of dangerous goods other than liquids and gases in bulk in shipborne barges.

3 Special requirements

Unless otherwise specified, the following requirements shall govern the application of tables 19.1, 19.2 and 19.3 to both “on-deck” and “under-deck” stowage of dangerous goods where the numbers of the following paragraphs are indicated in the first column of the tables.

3.1 Water supplies

3.1.1 Arrangements shall be made to ensure immediate availability of a supply of water from the fire main at the required pressure either by permanent pressurization or by suitably placed remote arrangements for the fire pumps.

3.1.2 The quantity of water delivered shall be capable of supplying four nozzles of a size and at pressures as specified in regulation 10.2, capable of being trained on any part of the cargo space when empty. This amount of water may be applied by equivalent means to the satisfaction of the Administration.

3.1.3 Means shall be provided for effectively cooling the designated underdeck cargo space by at least 5 l/min per square metre of the horizontal area of cargo spaces, either by a fixed arrangement of spraying nozzles or flooding the cargo space with water. Hoses may be used for this purpose in small cargo spaces and in small areas of larger cargo spaces at the discretion of the Administration. However, the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. The drainage system shall be sized to remove no less than 125% of the combined capacity of both the water spraying system pumps and the required number of fire hose nozzles. The drainage system valves shall be operable from outside the protected space at a position in the vicinity of the extinguishing system controls. Bilge wells shall be of sufficient holding capacity and shall be arranged at the side shell of the ship at a distance from each other of not more than 40 m in each watertight compartment. If this is not possible, the adverse effect upon stability of the added weight and free surface of water shall be taken into account to the extent deemed necessary by the Administration in its approval of the stability information.*

3.1.4 Provision to flood a designated under-deck cargo space with suitable specified media may be substituted for the requirements in paragraph 3.1.3.

3.1.5 The total required capacity of the water supply shall satisfy paragraphs 3.1.2 and 3.1.3, if applicable, simultaneously calculated for the largest designated cargo space. The capacity requirements of paragraph 3.1.2 shall be met by the total capacity of the main fire pump(s)

* Refer to the Recommendation on fixed fire-extinguishing systems for special cargo spaces adopted by the Organization by resolution A.123(V).

not including the capacity of the emergency fire pump, if fitted. If a drencher system is used to satisfy paragraph 3.1.3, the drencher pump shall also be taken into account in this total capacity calculation.

3.2 Sources of ignition

Electrical equipment and wiring shall not be fitted in enclosed cargo spaces or vehicle spaces unless it is essential for operational purposes in the opinion of the Administration. However, if electrical equipment is fitted in such spaces, it shall be of a certified safe type* for use in the dangerous environments to which it may be exposed unless it is possible to completely isolate the electrical system (e.g. by removal of links in the system, other than fuses). Cable penetrations of the decks and bulkheads shall be sealed against the passage of gas or vapour. Through runs of cables and cables within the cargo spaces shall be protected against damage from impact. Any other equipment which may constitute a source of ignition of flammable vapour shall not be permitted.

3.3 Detection system

Ro-ro spaces shall be fitted with a fixed fire detection and fire alarm system complying with the requirements of the Fire Safety Systems Code. All other types of cargo spaces shall be fitted with either a fixed fire detection and fire alarm system or a sample extraction smoke detection system complying with the requirements of the Fire Safety Systems Code. If a sample extraction smoke detection system is fitted, particular attention shall be made to paragraph 2.1.3 in chapter 10 of the Fire Safety Systems Code in order to prevent the leakage of toxic fumes into occupied areas.

3.4 Ventilation

3.4.1 Adequate power ventilation shall be provided in enclosed cargo spaces. The arrangement shall be such as to provide for at least six air changes per hour in the cargo space based on an empty cargo space and for removal of vapours from the upper or lower parts of the cargo space, as appropriate.

3.4.2 The fans shall be such as to avoid the possibility of ignition of flammable gas air mixtures. Suitable wire mesh guards shall be fitted over inlet and outlet ventilation openings.

3.4.3 Natural ventilation shall be provided in enclosed cargo spaces intended for the carriage of solid dangerous goods in bulk, where there is no provision for mechanical ventilation.

3.5 Bilge pumping

3.5.1 Where it is intended to carry flammable or toxic liquids in enclosed cargo spaces, the bilge pumping system shall be designed to protect against inadvertent pumping of such liquids through machinery space piping or pumps. Where large quantities of such liquids are carried, consideration shall be given to the provision of additional means of draining those cargo spaces.

* Refer to the recommendations of the International Electrotechnical Commission, in particular, publication IEC 60092 on Electrical installations in ships.

3.5.2 If the bilge drainage system is additional to the system served by pumps in the machinery space, the capacity of the system shall be not less than 10 m³/h per cargo space served. If the additional system is common, the capacity need not exceed 25 m³/h. The additional bilge system need not be arranged with redundancy.

3.5.3 Whenever flammable or toxic liquids are carried, the bilge line into the machinery space shall be isolated either by fitting a blank flange or by a closed lockable valve.

3.5.4 Enclosed spaces outside machinery spaces containing bilge pumps serving cargo spaces intended for carriage of flammable or toxic liquids should be fitted with separate mechanical ventilation giving at least 6 air changes per hour. If the space has access from another enclosed space, the door shall be self-closing.

3.5.5 If bilge drainage of cargo spaces is arranged by gravity drainage, the drainage shall be either led directly overboard or to a closed drain tank located outside the machinery spaces. The tank shall be provided with a vent pipe to a safe location on the open deck. Drainage from a cargo space into bilge wells in a lower space is only permitted if that space satisfies the same requirements as the cargo space above.

3.6 Personnel protection

3.6.1 Four sets of full protective clothing resistant to chemical attack shall be provided in addition to the fire-fighter's outfits required by regulation 10.10. The protective clothing shall cover all skin, so that no part of the body is unprotected.

3.6.2 At least two self-contained breathing apparatuses additional to those required by Regulation 10 shall be provided. Two spare charges suitable for use with the breathing apparatus shall be provided for each required apparatus. Passenger ships carrying not more than 36 passengers and cargo ships that are equipped with suitably located means for fully recharging the air cylinders free from contamination, need carry only one spare charge for each required apparatus.

Portable fire extinguishers with a total capacity of at least 12 kg of dry powder or equivalent shall be provided for the cargo spaces. These extinguishers shall be in addition to any portable fire extinguishers required elsewhere in this chapter.

3.8 Insulation of machinery space boundaries

Bulkheads forming boundaries between cargo spaces and machinery spaces of category A shall be insulated to "A-60" class standard, unless the dangerous goods are stowed at least 3 m horizontally away from such bulkheads. Other boundaries between such spaces shall be insulated to "A-60" class standard.

3.9 Water spray system

Each open ro-ro space having a deck above it and each space deemed to be a closed ro-ro space not capable of being sealed, shall be fitted with an approved fixed pressure water-spraying system for manual operation which shall protect all parts of any deck and vehicle platform in the space, except that the Administration may permit the use of any other

fixed fire-extinguishing system that has been shown by full-scale test to be no less effective. However, the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. The drainage system shall be sized to remove no less than 125% of the combined capacity of both the water spraying system pumps and the required number of fire hose nozzles. The drainage system valves shall be operable from outside the protected space at a position in the vicinity of the extinguishing system controls. Bilge wells shall be of sufficient holding capacity and shall be arranged at the side shell of the ship at a distance from each other of not more than 40 m in each watertight compartment. If this is not possible the adverse effect upon stability of the added weight and free surface of water shall be taken into account to the extent deemed necessary by the Administration in its approval of the stability information.*

3.10 Separation of ro-ro spaces

3.10.1 In ships having ro-ro spaces, a separation shall be provided between a closed ro-ro space and an adjacent open ro-ro space. The separation shall be such as to minimize the passage of dangerous vapours and liquids between such spaces. Alternatively, such separation need not be provided if the ro-ro space is considered to be a closed cargo space over its entire length and shall fully comply with the relevant special requirements of this Regulation.

3.10.2 In ships having ro-ro spaces, a separation shall be provided between a closed ro-ro space and the adjacent weather deck. The separation shall be such as to minimize the passage of dangerous vapours and liquids between such spaces. Alternatively, a separation need not be provided if the arrangements of the closed ro-ro spaces are in accordance with those required for the dangerous goods carried on adjacent weather deck.

4 Document of compliance**

The Administration shall provide the ship with an appropriate document as evidence of compliance of construction and equipment with the requirements of this regulation. Certification for dangerous goods, except solid dangerous goods in bulk, is not required for those cargoes specified as class 6.2 and 7 and dangerous goods in limited quantities.

* Refer to the Recommendation on fixed fire-extinguishing systems for special cargo spaces adopted by the Organization by resolution A.123(V).

** Refer to the Document of compliance with the special requirements for ships carrying dangerous goods under the provisions of regulation II-2/54 of SOLAS 74, as amended (MSC/Circ.642).

Table 19.1 – Application of the requirements to different modes of carriage of dangerous goods in ships and cargo spaces

Where X appears in table 19.1 it means this requirement is applicable to all classes of dangerous goods as given in the appropriate line of table 19.3, except as indicated by the notes.

Regulation 19.2.2	Weather decks .1 to .5 inclusive	.1 Not specially designed	.2 Container cargo spaces	.3		.4 Solid dangerous goods in bulk	.5 Shipborne barges
				Closed ro-ro spaces ⁵	Open ro-ro spaces		
Regulation 19							
.1.1	X	X	X	X	X		X
3.1.1	X	X	X	X	X		-
3.1.2	-	X	X	X	X		X
3.1.3	-	X	X	X	X		X
3.1.4	-	X	X	X	X		X ⁴
3.2	-	X	X	X	-		X ⁴
3.3	-	X	X ¹	X	-		X ⁴
3.4.1	-	X	X ¹	X	-		X ⁴
3.4.2	-	-	X	X	-		-
3.5	X	X	X	X	X		-
3.6.12	X	X	X	X	X		-
3.7	X	X	-	-	X		X ⁴
3.8	X	X	X ²	X	X		-
3.9	-	-	-	X ³	X		X

Regulation 19.2.2	Weather decks .1 to .5 inclusive	.1 Not specially designed	.2 Container cargo spaces	.3		.4 Solid dangerous goods in bulk	.5 Shipborne barges
				Closed ro-ro spaces ⁵	Open ro-ro spaces		
Regulation 19							
3.10.1	–	–	–	X	–		–
3.10.2	–	–	–	X	–		–

Notes

¹ For classes 4 and 5.1 not applicable to closed freight containers. For classes 2, 3, 6.1 and 8 when carried in closed freight containers the ventilation rate may be reduced to not less than two air changes. For the purpose of this requirement a portable tank is a closed freight container.

² Applicable to decks only.

³ Applies only to closed ro-ro spaces, not capable of being sealed.

⁴ In the special case where the barges are capable of containing flammable vapours or alternatively if they are capable of discharging flammable vapours to a safe space outside the barge carrier compartment by means of ventilation ducts connected to the barges, these requirements may be reduced or waived to the satisfaction of the Administration.

⁵ Special category spaces shall be treated as closed ro-ro spaces when dangerous goods are carried.

Table 19.2 - Application of the requirements to different classes of dangerous goods for ships and cargo spaces carrying solid dangerous goods in bulk

Regulation 19	Class	4.1	4.2	4.3 ⁶	5.1	6.1	8	9
3.1.1		X	X	–	X	–	–	X
3.1.2		X	X	–	X	–	–	X
3.2		X	X ⁷	X	X ⁸	–	–	X ⁸
3.4.1		–	X ⁷	X	–	–	–	–

	Class	4.1 X ⁹	4.2 X ⁷	4.3 ⁶ X	5.1 X ^{7,9}	6.1 –	8 –	9 X ^{7,9}
3.4.2		X	X	X	X	X	X	X
3.4.3		X	X	X	X	X	X	X
3.6		X	X	X	X	X	X	X
3.8		X	X	X	X ⁷	–	–	X ¹⁰

Notes:

⁶ The hazards of substances in this class which may be carried in bulk are such that special consideration must be given by the Administration to the construction and equipment of the ship involved in addition to meeting the requirements enumerated in this table.

⁷ Only applicable to Seedcake containing solvent extractions, to Ammonium nitrate and to Ammonium nitrate fertilizers.

⁸ Only applicable to Ammonium nitrate and to Ammonium nitrate fertilizers. However, a degree of protection in accordance with standards contained in the International Electrotechnical Commission publication 60079, Electrical Apparatus for Explosive Gas Atmospheres, is sufficient.

⁹ Only suitable wire mesh guards are required.

¹⁰ The requirements of the Code of Safe Practice for Solid bulk Cargoes adopted by resolution A.434(XI), as amended, are sufficient.

Class	1.1-1.6	1.4S	2.1	2.2	2.3	3.1 3.2 liquids ≤23°C ¹⁵	3.3 liquids >23°C ¹⁵ ≤61°C	4.1	4.2	4.3	5.1	5.2	6.1 liquids ≤23°C	6.1 liquids >23°C ≤61°C	6.1 solids	8 liquids	8 liquids ≤23°C	8 liquids >23°C ¹⁵ ≤61°C	8 solids	9
Regulation 19																				
3.10.1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3.10.2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Notes

¹¹ When “mechanically-ventilated spaces” are required by the International Maritime Dangerous Goods Code, as amended.

¹² Stow 3 m horizontally away from the machinery space boundaries in all cases.

¹³ Refer to the International Maritime Dangerous Goods Code, as amended.

¹⁴ As appropriate to the goods to be carried.

¹⁵ Refers to flashpoint.

Regulation 20

Protection of vehicle, special category and ro-ro spaces

1 Purpose

The purpose of this regulation is to provide additional safety measures in order to address the fire safety objectives of this chapter for ships fitted with vehicle, special category and ro-ro spaces. For this purpose, the following functional requirements shall be met:

- .1 fire protection systems shall be provided to adequately protect the ship from the fire hazards associated with vehicle, special category and ro-ro spaces;
- .2 ignition sources shall be separated from vehicle, special category and ro-ro spaces; and
- .3 vehicle, special category and ro-ro spaces shall be adequately ventilated.

2. General requirements

2.1 Application

In addition to complying with the requirements of regulations in parts B, C, D and E, as appropriate, vehicle, special category and ro-ro spaces shall comply with the requirements of this regulation.

2.2 Basic principles for passenger ships

2.2.1 The basic principle underlying the provisions of this regulation is that the main vertical zoning required by regulation 9.2 may not be practicable in vehicle spaces of passenger ships and, therefore, equivalent protection must be obtained in such spaces on the basis of a horizontal zone concept and by the provision of an efficient fixed fire-extinguishing system. Based on this concept, a horizontal zone for the purpose of this regulation may include special category spaces on more than one deck provided that the total overall clear height for vehicles does not exceed 10 m.

2.2.2 The basic principle underlying the provisions of paragraph 2.2.1 are also applicable to ro-ro spaces.

2.2.3 The requirements of ventilation systems, openings in "A" class divisions and penetrations in "A" class divisions for maintaining the integrity of vertical zones in this chapter shall be applied equally to decks and bulkheads forming the boundaries separating horizontal zones from each other and from the remainder of the ship.

3 Precaution against ignition of flammable vapours in closed vehicle spaces, closed ro-ro spaces and special category spaces

3.1 Ventilation systems

3.1.1 Capacity of ventilation systems

There shall be provided an effective power ventilation system sufficient to give at least the following air changes:

- .1 Passenger ships
 - Special category spaces 10 air changes per hour
 - Closed ro-ro and vehicle spaces 10 air changes per hour
 - other than special category spaces for ships carrying more than 36 passengers
 - Closed ro-ro and vehicle spaces 6 air changes per hour
 - other than special category spaces for ships carrying not more than 36 passengers
- .2 Cargo ships 6 air changes per hour

The Administration may require an increased number of air changes when vehicles are being loaded and unloaded.

3.1.2 Performance of ventilation systems

3.1.2.1 In passenger ships, the power ventilation system required in paragraph 3.1.1 shall be separate from other ventilation systems and shall be in operation at all times when vehicles are in such spaces. Ventilation ducts serving such cargo spaces capable of being effectively sealed shall be separated for each such space. The system shall be capable of being controlled from a position outside such spaces.

3.1.2.2 In cargo ships, ventilation fans shall normally be run continuously whenever vehicles are on board. Where this is impracticable, they shall be operated for a limited period daily as weather permits and in any case for a reasonable period prior to discharge, after which period the ro-ro or vehicle space shall be proved gas-free. One or more portable combustible gas detecting instruments shall be carried for this purpose. The system shall be entirely separate from other ventilating systems. Ventilation ducts serving ro-ro or vehicle spaces shall be capable of being effectively sealed for each cargo space. The system shall be capable of being controlled from a position outside such spaces.

3.1.2.3 The ventilation system shall be such as to prevent air stratification and the formation of air pockets.

3.1.3 Indication of ventilation systems

Means shall be provided on the navigation bridge to indicate any loss of the required ventilating capacity.

3.1.4 Closing appliances and ducts

3.1.4.1 Arrangements shall be provided to permit a rapid shutdown and effective closure of the ventilation system from outside of the space in case of fire, taking into account the weather and sea conditions.

3.1.4.2 Ventilation ducts, including dampers, within a common horizontal zone shall be made of steel. In passenger ships, ventilation ducts that pass through other horizontal zones or machinery spaces shall be "A-60" class steel ducts constructed in accordance with Regulations 9.7.2.1.1 and 9.7.2.1.2.

3.1.5 Permanent openings

Permanent openings in the side plating, the ends or deckhead of the space shall be so situated that a fire in the cargo space does not endanger stowage areas and embarkation stations for survival craft and accom-

modation spaces, service spaces and control stations in superstructures and deckhouses above the cargo spaces.

3.2 Electrical equipment and wiring

3.2.1 Except as provided in paragraph 3.2.2, electrical equipment and wiring shall be of a type suitable for use in an explosive petrol and air mixture.*

3.2.2 In case of other than special category spaces below the bulkhead deck, notwithstanding the provisions in paragraph 3.2.1, above a height of 450 mm from the deck and from each platform for vehicles, if fitted, except platforms with openings of sufficient size permitting penetration of petrol gases downwards, electrical equipment of a type so enclosed and protected as to prevent the escape of sparks shall be permitted as an alternative on condition that the ventilation system is so designed and operated as to provide continuous ventilation of the cargo spaces at the rate of at least ten air changes per hour whenever vehicles are on board.

3.3 Electrical equipment and wiring in exhaust ventilation ducts

Electrical equipment and wiring, if installed in an exhaust ventilation duct, shall be of a type approved for use in explosive petrol and air mixtures and the outlet from any exhaust duct shall be sited in a safe position, having regard to other possible sources of ignition.

3.4 Other ignition sources

Other equipment which may constitute a source of ignition of flammable vapours shall not be permitted.

3.5 Scuppers and discharges

Scuppers shall not be led to machinery or other spaces where sources of ignition may be present.

4 Detection and alarm

4.1 Fixed fire detection and fire alarm systems

Except as provided in paragraph 4.3.1, there shall be provided a fixed fire detection and fire alarm system complying with the requirements of the Fire Safety Systems Code. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The type of detectors and their spacing and location shall be to the satisfaction of the Administration taking into account the effects of ventilation and other relevant factors. After being installed the system shall be tested under normal ventilation conditions and shall give an overall response time to the satisfaction of the Administration.

4.2 Sample extraction smoke detection systems

Except open ro-ro spaces, open vehicle spaces and special category spaces, a sample extraction smoke detection system complying with the requirements of the Fire Safety Systems Code may be used as an alternative of the fixed fire detection and fire alarm system required in paragraph 4.1.

* Refer to the recommendations of the International Electrotechnical Commission, in particular publication 60079.

4.3 Special category spaces

4.3.1 An efficient fire patrol system shall be maintained in special category spaces. However, if an efficient fire patrol system is maintained by a continuous fire watch at all times during the voyage, a fixed fire detection and fire alarm system is not required.

4.3.2 Manually operated call points shall be spaced so that no part of the space is more than 20 m from a manually operated call point, and one shall be placed close to each exit from such spaces.

5 Structural protection

Notwithstanding the provisions of regulation 9.2.2, in passenger ships carrying more than 36 passengers, the boundary bulkheads and decks of special category spaces and ro-ro spaces shall be insulated to "A-60" class standard. However, where a category (5), (9) and (10) space, as defined in regulation 9.2.2.3, is on one side of the division the standard may be reduced to "A-0". Where fuel oil tanks are below a special category space or a ro-ro space, the integrity of the deck between such spaces, may be reduced to "A-0" standard.

6 Fire-extinction

6.1 Fixed fire-extinguishing systems*

6.1.1 Vehicle spaces and ro-ro spaces which are not special category spaces and are capable of being sealed from a location outside of the cargo spaces shall be fitted with a fixed gas fire-extinguishing system which shall comply with the provisions of the Fire Safety Systems Code, except that:

- .1 if a carbon dioxide system is fitted, the quantity of gas available shall be at least sufficient to give a minimum volume of free gas equal to 45% of the gross volume of the largest such cargo space which is capable of being sealed, and the arrangements shall be such as to ensure that at least two thirds of the gas required for the relevant space shall be introduced within 10 min;
- .2 any other fixed inert gas fire-extinguishing system or fixed high expansion foam fire-extinguishing system may be fitted provided the Administration is satisfied that an equivalent protection is achieved; and
- .3 as an alternative, a system meeting the requirements of paragraph 6.1.2 may be fitted.

* Refer to the Guidelines when approving alternative fixed water-based fire-fighting systems for use in special category spaces (MSC/Circ.914).

6.1.2 Ro-ro and vehicle spaces not capable of being sealed and special category spaces shall be fitted with an approved fixed pressure water spraying system* for manual operation which shall protect all parts of any deck and vehicle platform in such spaces. Such water spray systems shall have:

- .1 a pressure gauge on the valve manifold;
- .2 clear marking on each manifold valve indicating the spaces served;
- .3 instructions for maintenance and operation located in the valve room; and
- .4 a sufficient number of drainage valves.

6.1.3 The Administration may permit the use of any other fixed fire-extinguishing system** that has been shown that it is not less effective by a full-scale test in conditions simulating a flowing petrol fire in a vehicle space or a ro-ro space in controlling fires likely to occur in such a space.

6.1.4 When fixed pressure water-spraying systems are provided, in view of the serious loss of stability which could arise due to large quantities of water accumulating on the deck or decks during the operation of the fixed pressure water-spraying system, the following arrangements shall be provided:

- .1 in passenger ships:
 - .1.1 in the spaces above the bulkhead deck, scuppers shall be fitted so as to ensure that such water is rapidly discharged directly overboard;
 - .1.2.1 in ro-ro passenger ships discharge valves for scuppers, fitted with positive means of closing operable from a position above the bulkhead deck in accordance with the requirements of the International Convention on Load Lines in force, shall be kept open while the ships are at sea;
 - .1.2.2 any operation of valves referred to in paragraph 6.1.4.1.2.1 shall be recorded in the log-book;
 - .1.3 in the spaces below the bulkhead deck, the Administration may require pumping and drainage facilities to be provided additional to the requirements of regulation II-1/21. In such case, the drainage system shall be sized to remove no less than 125% of the combined capacity of both the water spraying system pumps and the required number of fire hose nozzles. The drainage system valves shall be operable from outside the protected space at a position in the vicinity of the extinguishing system controls. Bilge wells shall be of sufficient holding capacity and shall be arranged at the side

* Refer to the Recommendation on fixed fire-extinguishing systems for special cargo spaces adopted by the Organization by resolution A.123(V).

** Refer to the Guidelines when approving alternative fixed water-based fire-fighting systems for use in special category spaces (MSC/Circ.914).

- shell of the ship at a distance from each other of not more than 40 m in each watertight compartment;
- .2 in cargo ships, the drainage and pumping arrangements shall be such as to prevent the build-up of free surfaces. In such case, the drainage system shall be sized to remove no less than 125% of the combined capacity of both the water spraying system pumps and the required number of fire hose nozzles. The drainage system valves shall be operable from outside the protected space at a position in the vicinity of the extinguishing system controls. Bilge wells shall be of sufficient holding capacity and shall be arranged at the side shell of the ship at a distance from each other of not more than 40 m in each watertight compartment. If this is not possible the adverse effect upon stability of the added weight and free surface of water shall be taken into account to the extent deemed necessary by the Administration in its approval of the stability information.* Such information shall be included in the stability information supplied to the master as required by regulation II-1/22.
- 6.2 Portable fire extinguishers
- 6.2.1 Portable extinguishers shall be provided at each deck level in each hold or compartment where vehicles are carried, spaced not more than 20 m apart on both sides of the space. At least one portable fire-extinguisher shall be located at each access to such a cargo space.
- 6.2.2 In addition to the provision of paragraph 6.2.1, the following fire extinguishing appliances shall be provided in vehicle, ro-ro and special category spaces intended for the carriage of motor vehicles with fuel in their tanks for their own propulsion:
- .1 at least three water-fog applicators; and
- .2 one portable foam applicator unit complying with the provisions of the Fire Safety Systems Code, provided that at least two such units are available in the ship for use in such ro-ro spaces.”

CHAPTER V

SAFETY OF NAVIGATION

7 The existing text of chapter V is replaced by the following:

“Regulation 1

Application

1 Unless expressly provided otherwise, this chapter shall apply to all ships on all voyages, except:

* Refer to the Recommendation on fixed fire-extinguishing systems for special cargo spaces adopted by the Organization by resolution A.123(V).

- .1 warships, naval auxiliaries and other ships owned or operated by a Contracting Government and used only on government non-commercial service; and
- .2 ships solely navigating the Great Lakes of North America and their connecting and tributary waters as far east as the lower exit of the St. Lambert Lock at Montreal in the Province of Quebec, Canada.

However, warships, naval auxiliaries or other ships owned or operated by a Contracting Government and used only on government non-commercial service are encouraged to act in a manner consistent, so far as reasonable and practicable, with this chapter.

2. The Administration may decide to what extent this chapter shall apply to ships operating solely in waters landward of the baselines which are established in accordance with international law.

3 A rigidly connected composite unit of a pushing vessel and associated pushed vessel, when designed as a dedicated and integrated tug and barge combination, shall be regarded as a single ship for the purpose of this chapter.

4 The Administration shall determine to what extent the provisions of regulations 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 and 28 do not apply to the following categories of ships:

- .1 ships below 150 gross tonnage engaged on any voyage;
- .2 ships below 500 gross tonnage not engaged on international voyages; and
- .3 fishing vessels.

Regulation 2

Definitions

For the purpose of this chapter:

1 Constructed in respect of a ship means a stage of construction where:

- .1 the keel is laid; or
- .2 construction identifiable with a specific ship begins; or
- .3 assembly of the ship has commenced comprising at least 50 tonnes or 1% of the estimated mass of all structural material which-ever is less.

2. Nautical chart or nautical publication is a special-purpose map or book, or a specially compiled database from which such a map or book is derived, that is issued officially by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution and is designed to meet the requirements of marine navigation.

*

3 All ships means any ship, vessel or craft irrespective of type and purpose.

Regulation 3

Exemptions and equivalents

1 The Administration may grant general exemptions to ships without mechanical means of propulsion from the requirements of regulations 15, 17, 18, 19 (except 19.2.1.7), 20, 22, 24, 25, 26, 27 and 28.

2. The Administration may grant to individual ships exemptions or equivalents of a partial or conditional nature, when any such ship is engaged on a voyage where the maximum distance of the ship from the shore, the length and nature of the voyage, the absence of general navigational hazards, and other conditions affecting safety are such as to render the full application of this chapter unreasonable or unnecessary, provided that the Administration has taken into account the effect such exemptions and equivalents may have upon the safety of all other ships.

3 Each Administration shall submit to the Organization, as soon as possible after 1 January in each year, a report summarising all new exemptions and equivalents granted under paragraph 2 of this regulation during the previous calendar year and giving the reasons for granting such exemptions and equivalents. The Organization shall circulate such particulars to other Contracting Governments for information.

Regulation 4

Navigational warnings

Each Contracting Government shall take all steps necessary to ensure that, when intelligence of any dangers is received from whatever reliable source, it shall be promptly brought to the knowledge of those concerned and communicated to other interested Governments.**

* Refer to appropriate resolutions and recommendations of the International Hydrographic Organization concerning the authority and responsibilities of coastal States in the provision of charting in accordance with regulation 9.

** Refer to the Guidance on the IMO/IHO World-Wide Navigational Warning Service adopted by the Organization by resolution A.706(17), as amended.

Regulation 5

Meteorological services and warnings

1 Contracting Governments undertake to encourage the collection of meteorological data by ships at sea and to arrange for their examination, dissemination and exchange in the manner most suitable for the purpose of aiding navigation.* Administrations shall encourage the use of meteorological instruments of a high degree of accuracy, and shall facilitate the checking of such instruments upon request. Arrangements may be made by appropriate national meteorological services for this checking to be undertaken, free of charge to the ship.

2. In particular, Contracting Governments undertake to carry out, in co-operation, the following meteorological arrangements:

- .1 to warn ships of gales, storms and tropical cyclones by the issue of information in text and, as far as practicable graphic form, using the appropriate shore-based facilities for terrestrial and space radiocommunications services.
- .2 to issue, at least twice daily, by terrestrial and space radiocommunication services**, as appropriate, weather information suitable for shipping containing data, analyses, warnings and forecasts of weather, waves and ice. Such information shall be transmitted in text and, as far as practicable, graphic form including meteorological analysis and prognosis charts transmitted by facsimile or in digital form for reconstitution on board the ship's data processing system.
- .3 to prepare and issue such publications as may be necessary for the efficient conduct of meteorological work at sea and to arrange, if practicable, for the publication and making available of daily weather charts for the information of departing ships.
- .4 to arrange for a selection of ships to be equipped with tested marine meteorological instruments (such as a barometer, a barograph, a psychrometer, and suitable apparatus for measuring sea temperature) for use in this service, and to take, record and transmit meteorological observations at the main standard times for surface synoptic observations (i.e. at least four times daily, whenever circumstances permit) and to encourage other ships to take, record and transmit observations in a modified form, particularly when in areas where shipping is sparse.
- .5 to encourage companies to involve as many of their ships as practicable in the making and recording of weather observations; these observations to be transmitted using the ship's terrestrial or space radiocommunications facilities for the benefit

* Refer to the Recommendation on weather routing adopted by the Organization by resolution A.528(13).

** Refer to regulations IV/7.1.4 and IV/7.1.5.

- of the various national meteorological services.
- .6 the transmission of these weather observations is free of charge to the ships concerned.
 - .7 when in the vicinity of a tropical cyclone, or of a suspected tropical cyclone, ships should be encouraged to take and transmit their observations at more frequent intervals whenever practicable, bearing in mind navigational preoccupations of ships' officers during storm conditions.
 - .8 to arrange for the reception and transmission of weather messages from and to ships, using the appropriate shore-based facilities for terrestrial and space radiocommunications services.
 - .9 to encourage masters to inform ships in the vicinity and also shore stations whenever they experience a wind speed of 50 knots or more (force 10 on the Beaufort scale).
 - .10 to endeavour to obtain a uniform procedure in regard to the international meteorological services already specified, and as far as practicable, to conform to the technical regulations and recommendations made by the World Meteorological Organization, to which Contracting Governments may refer, for study and advice, any meteorological question which may arise in carrying out the present Convention.

3 The information provided for in this regulation shall be furnished in a form for transmission and be transmitted in the order of priority prescribed by the Radio Regulations. During transmission "to all stations" of meteorological information, forecasts and warnings, all ship stations must conform to the provisions of the Radio Regulations.

4 Forecasts, warnings, synoptic and other meteorological data intended for ships shall be issued and disseminated by the national meteorological service in the best position to serve various coastal and high seas areas, in accordance with mutual arrangements made by Contracting Governments, in particular as defined by the World Meteorological Organization's System for the Preparation and Dissemination of Meteorological Forecasts and Warnings for the High Seas under the Global Maritime Distress and Safety System (GMDSS).

Regulation 6

Ice Patrol Service

1 The Ice Patrol contributes to safety of life at sea, safety and efficiency of navigation and protection of the marine environment in the North Atlantic. Ships transiting the region of icebergs guarded by the Ice Patrol during the ice season are required to make use of the services provided by the Ice Patrol.

2 The Contracting Governments undertake to continue an ice patrol and a service for study and observation of ice conditions in the North Atlantic. During the whole of the ice season, i.e. for the period from

February 15th through July 1st of each year, the southeastern, southern and south-western limits of the region of icebergs in the vicinity of the Grand Banks of Newfoundland shall be guarded for the purpose of informing passing ships of the extent of this dangerous region; for the study of ice conditions in general; and for the purpose of affording assistance to ships and crews requiring aid within the limits of operation of the patrol ships and aircraft. During the rest of the year the study and observation of ice conditions shall be maintained as advisable.

3 Ships and aircraft used for the ice patrol service and the study and observation of ice conditions may be assigned other duties provided that such other duties do not interfere with the primary purpose or increase the cost of this service.

4 The Government of the United States of America agrees to continue the overall management of the ice patrol service and the study and observation of ice conditions, including the dissemination of information therefrom.

5 The terms and conditions governing the management, operation and financing of the Ice Patrol are set forth in the Rules for the management, operation and financing of the North Atlantic Ice Patrol appended to this chapter which shall form an integral part of this chapter.

6 If, at any time, the United States and/or Canadian Governments should desire, to discontinue providing these services, it may do so and the Contracting Governments shall settle the question of continuing these services in accordance with their mutual interests. The United States and/or Canadian Governments shall provide 18 months written notice to all Contracting Governments whose ships entitled to fly their flag and whose ships registered in territories to which those Contracting Governments have extended this Regulation benefit from these services before discontinuing providing these services.

Regulation 7

Search and rescue services

1 Each Contracting Government undertakes to ensure that necessary arrangements are made for distress communication and co-ordination in their area of responsibility and for the rescue of persons in distress at sea around its coasts. These arrangements shall include the establishment, operation and maintenance of such search and rescue facilities as are deemed practicable and necessary, having regard to the density of the seagoing traffic and the navigational dangers and shall, so far as possible, provide adequate means of locating and rescuing such persons.*

* Refer to the International Convention on Maritime Search and Rescue, 1979

2 Each Contracting Government undertakes to make available information to the Organization concerning its existing search and rescue facilities and the plans for changes therein, if any.

3 Passenger ships to which chapter I applies shall have on board a plan for co-operation with appropriate search and rescue services in event of an emergency. The plan shall be developed in co-operation between the ship, the company, as defined in Regulation IX/1 and the search and rescue services. The plan shall include provisions for periodic exercises to be undertaken to test its effectiveness. The plan shall be developed based on the guidelines developed by the Organization.

Regulation 8

Life-saving signals

Contracting Governments undertake to arrange that life-saving signals are used by search and rescue facilities engaged in search and rescue operations when communicating with ships or persons in distress.

Regulation 9

Hydrographic services

1 Contracting Governments undertake to arrange for the collection and compilation of hydrographic data and the publication, dissemination and keeping up to date of all nautical information necessary for safe navigation.

2 In particular, Contracting Governments undertake to co-operate in carrying out, as far as possible, the following nautical and hydrographic services, in the manner most suitable for the purpose of aiding navigation:

- .1 to ensure that hydrographic surveying is carried out, as far as possible, adequate to the requirements of safe navigation;
- .2 to prepare and issue nautical charts, sailing directions, lists of lights, tide tables and other nautical publications, where applicable, satisfying the needs of safe navigation;
- .3 to promulgate notices to mariners in order that nautical charts and publications are kept, as far as possible, up to date; and

and the following resolutions adopted by the Organization:

Homing capability of search and rescue (SAR) aircraft (resolution A.225(VII));
 Use of radar transponders for search and rescue purposes (resolution A.530(13));
 Search and rescue homing capability (resolution A.616(15)); and
 International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual (resolution A.894(21)).

.4 to provide data management arrangements to support these services.

3 Contracting Governments undertake to ensure the greatest possible uniformity in charts and nautical publications and to take into account, whenever possible, relevant international resolutions and recommendations.*

4 Contracting Governments undertake to co-ordinate their activities to the greatest possible degree in order to ensure that hydrographic and nautical information is made available on a world-wide scale as timely, reliably, and unambiguously as possible.

Regulation 10

Ships' routeing

1 Ships' routeing systems contribute to safety of life at sea, safety and efficiency of navigation and/or protection of the marine environment. Ships' routeing systems are recommended for use by, and may be made mandatory for, all ships, certain categories of ships or ships carrying certain cargoes, when adopted and implemented in accordance with the guidelines and criteria developed by the Organization.**

2 The Organization is recognized as the only international body for developing guidelines, criteria and regulations on an international level for ships' routeing systems. Contracting Governments shall refer proposals for the adoption of ships' routeing systems to the Organization. The Organization will collate and disseminate to Contracting Governments all relevant information with regard to any adopted ships' routeing systems.

3 The initiation of action for establishing a ships' routeing system is the responsibility of the Government or Governments concerned. In developing such systems for adoption by the Organization, the guidelines and criteria developed by the Organization* shall be taken into account.

4 Ships' routeing systems should be submitted to the Organization for adoption. However, a Government or Governments implementing ships' routeing systems not intended to be submitted to the Organization for adoption or which have not been adopted by the Organization are encouraged to take into account, wherever possible, the guidelines and criteria developed by the Organization.*

5 Where two or more Governments have a common interest in a particular area, they should formulate joint proposals for the delineation and

* Refer to the appropriate resolutions and recommendations adopted by the International Hydrographic Organization.

** Refer to the General Provisions on Ships' Routeing adopted by the Organization by resolution A.572(14), as amended.

use of a routing system therein on the basis of an agreement between them. Upon receipt of such proposal and before proceeding with consideration of it for adoption, the Organization shall ensure details of the proposal are disseminated to the Governments which have a common interest in the area, including countries in the vicinity of the proposed ships' routing system.

6 Contracting Governments shall adhere to the measures adopted by the Organization concerning ships' routing. They shall promulgate all information necessary for the safe and effective use of adopted ships' routing systems. A Government or Governments concerned may monitor traffic in those systems. Contracting Governments shall do everything in their power to secure the appropriate use of ships' routing systems adopted by the Organization.

7 A ship shall use a mandatory ships' routing system adopted by the Organization as required for its category or cargo carried and in accordance with the relevant provisions in force unless there are compelling reasons not to use a particular ships' routing system. Any such reason shall be recorded in the ships' log.

8 Mandatory ships' routing systems shall be reviewed by the Contracting Government or Governments concerned in accordance with the guidelines and criteria developed by the Organization.*

9 All adopted ships' routing systems and actions taken to enforce compliance with those systems shall be consistent with international law, including the relevant provisions of the 1982 United Nations Convention on the Law of the Sea.

10 Nothing in this regulation nor its associated guidelines and criteria shall prejudice the rights and duties of Governments under international law or the legal regimes of straits used for international navigation and archipelagic sea lanes.

Regulation 11

*Ship reporting systems***

1 Ship reporting systems contribute to safety of life at sea, safety and efficiency of navigation and/or protection of the marine environment. A ship reporting system, when adopted and implemented in accordance

* Refer to the General Provisions on Ships' Routing adopted by the Organization by resolution A.572(14)), as amended.

** This regulation does not address ship reporting systems established by Governments for search and rescue purposes which are covered by chapter 5 of the 1979 SAR Convention as amended.

with the guidelines and criteria developed by the Organization* pursuant to this regulation, shall be used by all ships, or certain categories of ships or ships carrying certain cargoes in accordance with the provisions of each system so adopted.

2 The Organization is recognized as the only international body for developing guidelines, criteria and regulations on an international level for ship reporting systems. Contracting Government shall refer proposals for the adoption of ship reporting systems to the Organization. The Organization will collate and disseminate to Contracting Governments all relevant information with regard to any adopted ship reporting system.

3 The initiation of action for establishing a ship reporting system is the responsibility of the Government or Governments concerned. In developing such systems provision of the guidelines and criteria developed by the Organization*** shall be taken into account.

4 Ship reporting systems not submitted to the Organization for adoption do not necessarily need to comply with this regulation. However, Governments implementing such systems are encouraged to follow, wherever possible, the guidelines and criteria developed by the Organization***. Contracting Governments may submit such systems to the Organization for recognition.

5 Where two or more Governments have a common interest in a particular area, they should formulate proposals for a co-ordinated ship reporting system on the basis of agreement between them. Before proceeding with a proposal for adoption of a ship reporting system, the Organization shall disseminate details of the proposal to those Governments which have a common interest in the area covered by the proposed system. Where a co-ordinated ship reporting system is adopted and established, it shall have uniform procedures and operations.

6 After adoption of a ship reporting system in accordance with this regulation, the Government or Governments concerned shall take all measures necessary for the promulgation of any information needed for the efficient and effective use of the system. Any adopted ship reporting system shall have the capability of interaction and the ability to assist ships with information when necessary. Such systems shall be operated

* Refer to the guidelines and criteria adopted by the Maritime Safety Committee of the Organization by resolution MSC.43(64), as amended by resolution MSC.111(73). Refer also to the General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants, adopted by the Organization by resolution A.851(20).

in accordance with the guidelines and criteria developed by the Organization* pursuant to this regulation.

7 The master of a ship shall comply with the requirements of adopted ship reporting systems and report to the appropriate authority all information required in accordance with the provisions of each such system.

8 All adopted ship reporting systems and actions taken to enforce compliance with those systems shall be consistent with international law, including the relevant provisions of the United Nations Convention on the Law of the Sea.

9 Nothing in this regulation or its associated guidelines and criteria shall prejudice the rights and duties of Governments under international law or the legal regimes of straits used for international navigation and archipelagic sea lanes.

10 The participation of ships in accordance with the provisions of adopted ship reporting systems shall be free of charge to the ships concerned.

11 The Organization shall ensure that adopted ship reporting systems are reviewed under the guidelines and criteria developed by the Organization.

Regulation 12

Vessel traffic services

1 Vessel traffic services (VTS) contribute to safety of life at sea, safety and efficiency of navigation and protection of the marine environment, adjacent shore areas, work sites and offshore installations from possible adverse effects of maritime traffic.

2 Contracting Governments undertake to arrange for the establishment of VTS where, in their opinion, the volume of traffic or the degree of risk justifies such services.

3 Contracting Governments planning and implementing VTS shall, wherever possible, follow the guidelines developed by the Organization**. The use of VTS may only be made mandatory in sea areas within the territorial seas of a coastal State.

* Refer to the guidelines and criteria adopted by the Maritime Safety Committee of the Organization by resolution MSC.43(64), as amended by resolution MSC.111(73). Refer also to the General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants, adopted by the Organization by resolution A.851(20).

** Refer to the Guidelines on Vessel Traffic Services adopted by the Organization by resolution A.857(20).

4 Contracting Governments shall endeavour to secure the participation in, and compliance with, the provisions of vessel traffic services by ships entitled to fly their flag.

5 Nothing in this regulation or the guidelines adopted by the Organization shall prejudice the rights and duties of Governments under international law or the legal regimes of straits used for international navigation and archipelagic sea lanes.

Regulation 13

Establishment and operation of aids to navigation

1 Each Contracting Government undertakes to provide, as it deems practical and necessary either individually or in co-operation with other Contracting Governments, such aids to navigation as the volume of traffic justifies and the degree of risk requires.

2 In order to obtain the greatest possible uniformity in aids to navigation, Contracting Governments undertake to take into account the international recommendations and guidelines* when establishing such aids.

3 Contracting Governments undertake to arrange for information relating to aids to navigation to be made available to all concerned. Changes in the transmissions of position-fixing systems which could adversely affect the performance of receivers fitted in ships shall be avoided as far as possible and only be effected after timely and adequate notice has been promulgated.

Regulation 14

Ships' manning

1 Contracting Governments undertake, each for its national ships, to maintain, or, if it is necessary, to adopt, measures for the purpose of ensuring that, from the point of view of safety of life at sea, all ships shall be sufficiently and efficiently manned.**

2 Every ship to which chapter I applies shall be provided with an appropriate minimum safe manning document or equivalent issued by the Administration as evidence of the minimum safe manning considered necessary to comply with the provisions of paragraph 1.

3 On all ships, to ensure effective crew performance in safety matters, a working language shall be established and recorded in the ship's

* Refer to the appropriate recommendations and guidelines of IALA and SN/Circ.107 – Maritime Buoyage System.

** Refer to the Principles of Safe Manning adopted by the Organization by resolution A.890(21).

log-book. The company, as defined in regulation IX/1, or the master, as appropriate, shall determine the appropriate working language. Each seafarer shall be required to understand and, where appropriate, give orders and instructions and to report back in that language. If the working language is not an official language of the State whose flag the ship is entitled to fly, all plans and lists required to be posted shall include a translation into the working language.

4 On ships to which chapter I applies, English shall be used on the bridge as the working language for bridge-to-bridge and bridge-to-shore safety communications as well as for communications on board between the pilot and bridge watchkeeping personnel*, unless those directly involved in the communication speak a common language other than English.

Regulation 15

Principles relating to bridge design, design and arrangement of navigational systems and equipment and bridge procedures

All decisions which are made for the purpose of applying the requirements of Regulations 19, 22, 24, 25, 27 and 28 and which affect bridge design, the design and arrangement of navigational systems and equipment on the bridge and bridge procedures** shall be taken with the aim of:

- .1 facilitating the tasks to be performed by the bridge team and the pilot in making full appraisal of the situation and in navigating the ship safely under all operational conditions;
- .2 promoting effective and safe bridge resource management;
- .3 enabling the bridge team and the pilot to have convenient and continuous access to essential information which is presented in a clear and unambiguous manner, using standardized symbols and coding systems for controls and displays;
- .4 indicating the operational status of automated functions and integrated components, systems and/or sub-systems;
- .5 allowing for expeditious, continuous and effective information processing and decision-making by the bridge team and the pilot;
- .6 preventing or minimizing excessive or unnecessary work and any conditions or distractions on the bridge which may cause fatigue or interfere with the vigilance of the bridge team and the pilot; and

* The IMO Standard Marine Communications Phrases (SMCPs) (MSC/Circ.794), as amended, may be used in this respect.

** Refer to Guidelines on ergonomic criteria for bridge equipment and layout (MSC/Circ.982). Performance standards for IBS (resolution MSC.64(67); annex 1); and for INS (resolution MSC.86(70); annex 3).

- .7 minimizing the risk of human error and detecting such error if it occurs, through monitoring and alarm systems, in time for the bridge team and the pilot to take appropriate action.

Regulation 16

Maintenance of equipment

1 The Administration shall be satisfied that adequate arrangements are in place to ensure that the performance of the equipment required by this chapter is maintained.

2 Except as provided in regulations I/7(b)(ii), I/8 and I/9, while all reasonable steps shall be taken to maintain the equipment required by this chapter in efficient working order, malfunctions of that equipment shall not be considered as making the ship unseaworthy or as a reason for delaying the ship in ports where repair facilities are not readily available, provided suitable arrangements are made by the master to take the inoperative equipment or unavailable information into account in planning and executing a safe voyage to a port where repairs can take place.

Regulation 17

Electromagnetic compatibility

1 Administrations shall ensure that all electrical and electronic equipment on the bridge or in the vicinity of the bridge, on ships constructed on or after 1 July 2002, is tested for electromagnetic compatibility taking into account the recommendations developed by the Organization.*

2 Electrical and electronic equipment shall be so installed that electromagnetic interference does not affect the proper function of navigational systems and equipment.

3 Portable electrical and electronic equipment shall not be operated on the bridge if it may affect the proper function of navigational systems and equipment.

Regulation 18

Approval, surveys and performance standards of navigational systems and equipment and voyage data recorder

1 Systems and equipment required to meet the requirements of regulations 19 and 20 shall be of a type approved by the Administration.

* Refer to the General requirements for Electromagnetic Compatibility for all Electrical and Electronic Ship's Equipment adopted by the Organization by resolution A.813(19).

2 Systems and equipment, including associated back-up arrangements, where applicable, installed on or after 1 July 2002 to perform the functional requirements of regulations 19 and 20 shall conform to appropriate performance standards not inferior to those adopted by the Organization.*

* Refer to the following recommendations adopted by the Organization by the resolutions indicated:

Recommendations on general requirements for shipborne radio equipment forming part of the Global Maritime Distress and Safety System (GMDSS) and for Electronic Navigational Aids (resolution A.694(17));

Recommendation on Performance Standards for gyro-compasses (resolution A.424(XI));

Recommendation on Performance Standards for radar equipment (resolution MSC.64(67), annex 4);

Performance Standards for automatic radar plotting aids (resolution A.823(19));

Recommendation on Performance Standards for Electronic Chart Display and Information Systems (ECDIS) (resolution A.817(19)), as amended by resolutions MSC.64(67), annex 5 and MSC.86(70), Annex 4, as appropriate;

Recommendation on accuracy standards for navigation (resolution A.529(13));

Recommendation on Performance Standards for shipborne Loran-C and Chayka receivers (resolution A.818(19));

Recommendation on Performance Standards for shipborne global positioning system receiver equipment (resolution A.819(19)) as amended by resolution MSC.112(73);

Recommendation on Performance Standards for shipborne GLONASS receiver equipment (resolution MSC.53(66)) as amended by resolution MSC.113(73);

Recommendation on Performance Standards for shipborne DGPS and DGLONASS maritime radio beacon receiver equipment (resolution MSC.64(67), annex 2) as amended by resolution MSC.114(73);

Recommendation on Performance Standards for combined GPS/GLONASS receiver equipment (resolution MSC.74(69), annex 1) as amended by resolution MSC.115(73);

Recommendation on Performance Standards for heading control systems (resolution MSC.64(67), annex 3);

Recommendation on Performance Standards for track control systems (resolution MSC.74(69), annex 2);

Recommendation on Performance Standards for a universal shipborne automatic identification system (AIS) (resolution MSC.74(69), annex 3);

Recommendation on Performance Standards for echo-sounding equipment (resolution A.224(VII), as amended by resolution MSC.74(69), annex 4);

Recommendation on Performance Standards for devices to indicate speed and distance (resolution A.824(19)), as amended by resolution MSC.96(72); Performance Standards for rate-of-turn indicators (resolution A.526(13));

Recommendation on unification of Performance Standards for navigational equipment (resolution A.575(14));

Recommendation on methods of measuring noise levels at listening posts (resolution A.343(IX));

Recommendation on Performance Standards for radar reflectors (resolution A.384(X));

Recommendation on Performance Standards for magnetic compasses (resolu-

3 When systems and equipment are replaced or added to on ships constructed before 1 July 2002, such systems and equipment shall, in so far as is reasonable and practicable, comply with the requirements of paragraph 2.

4 Systems and equipment installed prior to the adoption of performance standards by the Organization may subsequently be exempted from full compliance with such standards at the discretion of the Administration, having due regard to the recommended criteria adopted by the Organization. However, for an electronic chart display and information system (ECDIS) to be accepted as satisfying the chart carriage requirement of Regulation 19.2.1.4, that system shall conform to the relevant performance standards not inferior to those adopted by the Organization in effect on the date of installation, or, for systems installed before 1 January 1999, not inferior to the performance standards adopted by the Organization on 23 November 1995*.

5 The Administration shall require that the manufacturers have a quality control system audited by a competent authority to ensure continuous compliance with the type approval conditions. Alternatively, the Administration may use final product verification procedures where the compliance with the type approval certificate is verified by a competent authority before the product is installed on board ships.

6 Before giving approval to systems or equipment embodying new features not covered by this chapter, the Administration shall ensure that such features support functions at least as effective as those required by this chapter.

7 When equipment, for which performance standards have been developed by the Organization, is carried on ships in addition to those items of equipment required by Regulations 19 and 20, such equipment shall be subject to approval and shall as far as practicable comply with performance standards not inferior to those adopted by the Organization.

8 The voyage data recorder system, including all sensors, shall be subjected to an annual performance test. The test shall be conducted by

tion A.382(X));

Recommendation on Performance Standards for daylight signalling lamps (resolution MSC.95(72));

Recommendation on Performance Standards for sound reception systems (resolution MSC.86(70), Annex 1);

Recommendation on Performance Standards for marine transmitting magnetic heading devices (TMHDs) (resolution MSC.86(70), annex 2);

Recommendation on Performance Standards for voyage data recorders (VDRs) (resolution A.861(20));

Recommendations on Performance Standards for marine transmitting heading devices (THDs) (resolution MSC.116(73)).

* Recommendation on Performance Standards for Electronic Chart Display and Information Systems (ECDIS) (resolution A.817(19)).

an approved testing or servicing facility to verify the accuracy, duration and recoverability of the recorded data. In addition, tests and inspections shall be conducted to determine the serviceability of all protective enclosures and devices fitted to aid location. A copy of the certificate of compliance issued by the testing facility, stating the date of compliance and the applicable performance standards, shall be retained on board the ship.

Regulation 19

Carriage requirements for shipborne navigational systems and equipment

1 Application and requirements

Subject to the provisions of regulation 1.4:

1.1 Ships constructed on or after 1 July 2002 shall be fitted with navigational systems and equipment which will fulfil the requirements prescribed in paragraphs 2.1 to 2.9.

1.2 Ships constructed before 1 July 2002 shall:

- .1 subject to the provisions of paragraphs 1.2.2 and 1.2.3, unless they comply fully with this regulation, continue to be fitted with equipment which fulfils the requirements prescribed in regulations V/11, V/12 and V/20 of the International Convention for the Safety of Life at Sea, 1974 in force prior to 1 July 2002;
- .2 be fitted with the equipment or systems required in paragraph 2.1.6 not later than the first survey after 1 July 2002 at which time the radio direction-finding apparatus referred to in V/12 (p) of the International Convention for the Safety of Life at Sea, 1974 in force prior to 1 July 2002 shall no longer be required; and
- .3 be fitted with the system required in paragraph 2.4 not later than the dates specified in paragraphs 2.4.2 and 2.4.3.

2 Shipborne navigational equipment and systems

2.1 All ships irrespective of size shall have:

- .1 a properly adjusted standard magnetic compass, or other means, independent of any power supply to determine the ship's heading and display the reading at the main steering position;
- .2 a pelorus or compass bearing device, or other means, independent of any power supply to take bearings over an arc of the horizon of 360°;
- .3 means of correcting heading and bearings to true at all times;
- .4 nautical charts and nautical publications to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage; an electronic chart display and information system (ECDIS) may be accepted as meeting the chart carriage requirements of this subparagraph;
- .5 back-up arrangements to meet the functional requirements of

subparagraph .4, if this function is partly or fully fulfilled by electronic means;*

- .6 a receiver for a global navigation satellite system or a terrestrial radionavigation system, or other means, suitable for use at all times throughout the intended voyage to establish and update the ship's position by automatic means;
 - .7 if less than 150 gross tonnage and if practicable, a radar reflector, or other means, to enable detection by ships navigating by radar at both 9 and 3 GHz;
 - .8 when the ship's bridge is totally enclosed and unless the Administration determines otherwise, a sound reception system, or other means, to enable the officer in charge of the navigational watch to hear sound signals and determine their direction;
 - .9 a telephone, or other means, to communicate heading information to the emergency steering position, if provided.
- 2.2 All ships of 150 gross tonnage and upwards and passenger ships irrespective of size shall, in addition to the requirements of paragraph 2.1, be fitted with:
- .1 a spare magnetic compass interchangeable with the magnetic compass, as referred to in paragraph 2.1.1, or other means to perform the function referred to in paragraph 2.1.1 by means of replacement or duplicate equipment;
 - .2 a daylight signalling lamp, or other means to communicate by light during day and night using an energy source of electrical power not solely dependent upon the ship's power supply.
- 2.3 All ships of 300 gross tonnage and upwards and passenger ships irrespective of size shall, in addition to meeting the requirements of paragraph 2.2, be fitted with:
- .1 an echo sounding device, or other electronic means, to measure and display the available depth of water;
 - .2 a 9 GHz radar, or other means to determine and display the range and bearing of radar transponders and of other surface craft, obstructions, buoys, shorelines and navigational marks to assist in navigation and in collision avoidance;
 - .3 an electronic plotting aid, or other means, to plot electronically the range and bearing of targets to determine collision risk;
 - .4 speed and distance measuring device, or other means, to indicate speed and distance through the water;
 - .5 a properly adjusted transmitting heading device, or other means to transmit heading information for input to the equipment referred to in paragraphs 2.3.2, 2.3.3 and 2.4.

* An appropriate folio of paper nautical charts may be used as a back-up arrangement for ECDIS. Other back-up arrangements for ECDIS are acceptable (see appendix 6 to resolution A.817(19), as amended).

2.4 All ships of 300 gross tonnage and upwards engaged on international voyages and cargo ships of 500 gross tonnage and upwards not engaged on international voyages and passenger ships irrespective of size shall be fitted with an automatic identification system (AIS), as follows:

- .1 ships constructed on or after 1 July 2002;
- .2 ships engaged on international voyages constructed before 1 July 2002:
 - .2.1 in the case of passenger ships, not later than 1 July 2003;
 - .2.2 in the case of tankers, not later than the first survey for safety equipment* on or after 1 July 2003;
 - .2.3 in the case of ships, other than passenger ships and tankers, of 50,000 gross tonnage and upwards, not later than 1 July 2004;
 - .2.4 in the case of ships, other than passenger ships and tankers, of 10,000 gross tonnage and upwards but less than 50,000 gross tonnage, not later than 1 July 2005;
 - .2.5 in the case of ships, other than passenger ships and tankers, of 3,000 gross tonnage and upwards but less than 10,000 gross tonnage, not later than 1 July 2006.
 - .2.6 in the case of ships, other than passenger ships and tankers, of 300 gross tonnage and upwards but less than 3,000 gross tonnage, not later than 1 July 2007; and
- .3 ships not engaged on international voyages constructed before 1 July 2002, not later than 1 July 2008;
- .4 the Administration may exempt ships from the application of the requirements of this paragraph when such ships will be taken permanently out of service within two years after the implementation date specified in subparagraphs .2 and .3;
- .5 AIS shall:
 - .1 provide automatically to appropriately equipped shore stations, other ships and aircraft information, including the ship's identity, type, position, course, speed, navigational status and other safety-related information;
 - .2 receive automatically such information from similarly fitted ships;
 - .3 monitor and track ships; and
 - .4 exchange data with shore-based facilities;
- .6 the requirements of paragraph 2.4.5 shall not be applied to cases where international agreements, rules or standards provide for the protection of navigational information; and
- .7 AIS shall be operated taking into account the guidelines adopted by the Organization.**

* Refer to regulation I/8.

** Refer to the Guidelines on the operation of AIS on ships to be developed

2.5 All ships of 500 gross tonnage and upwards shall, in addition to meeting the requirements of paragraph 2.3 with the exception of paragraphs 2.3.3 and 2.3.5, and the requirements of paragraph 2.4, have:

- .1 a gyro compass, or other means, to determine and display their heading by shipborne non-magnetic means and to transmit heading information for input to the equipment referred in paragraphs 2.3.2, 2.4 and 2.5.5;
- .2 a gyro compass heading repeater, or other means, to supply heading information visually at the emergency steering position if provided;
- .3 a gyro compass bearing repeater, or other means, to take bearings, over an arc of the horizon of 360°, using the gyro compass or other means referred to in subparagraph .1. However ships less than 1,600 gross tonnage shall be fitted with such means as far as possible;
- .4 rudder, propeller, thrust, pitch and operational mode indicators, or other means to determine and display rudder angle, propeller revolutions, the force and direction of thrust and, if applicable, the force and direction of lateral thrust and the pitch and operational mode, all to be readable from the conning position; and
- .5 an automatic tracking aid, or other means, to plot automatically the range and bearing of other targets to determine collision risk.

2.6 On all ships of 500 gross tonnage and upwards, failure of one piece of equipment should not reduce the ship's ability to meet the requirements of paragraphs 2.1.1, 2.1.2 and 2.1.4.

2.7 All ships of 3000 gross tonnage and upwards shall, in addition to meeting the requirements of paragraph 2.5, have:

- .1 a 3 GHz radar or where considered appropriate by the Administration a second 9 GHz radar, or other means to determine and display the range and bearing of other surface craft, obstructions, buoys, shorelines and navigational marks to assist in navigation and in collision avoidance, which are functionally independent of those referred to in paragraph 2.3.2; and
- .2 a second automatic tracking aid, or other means to plot automatically the range and bearing of other targets to determine collision risk which are functionally independent of those referred to in paragraph 2.5.5.

2.8 All ships of 10,000 gross tonnage and upwards shall, in addition to meeting the requirements of paragraph 2.7 with the exception of paragraph 2.7.2, have:

- .1 an automatic radar plotting aid, or other means, to plot automatically the range and bearing of at least 20 other targets, connected to a device to indicate speed and distance through the

- water, to determine collision risks and simulate a trial manoeuvre; and
- .2 a heading or track control system, or other means, to automatically control and keep to a heading and/or straight track.
- 2.9 All ships of 50,000 gross tonnage and upwards shall, in addition to meeting the requirements of paragraph 2.8, have:
- .1 a rate of turn indicator, or other means, to determine and display the rate of turn; and
 - .2 a speed and distance measuring device, or other means, to indicate speed and distance over the ground in the forward and athwartships direction.
- 3 When “other means” are permitted under this regulation, such means must be approved by Administration in accordance with regulation 18.
- 4 The navigational equipment and systems referred to in this regulation shall be so installed, tested and maintained as to minimize malfunction.
- 5 Navigational equipment and systems offering alternative modes of operation shall indicate the actual mode of use.
- 6 Integrated bridge systems* shall be so arranged that failure of one sub-system is brought to immediate attention of the officer in charge of the navigational watch by audible and visual alarms, and does not cause failure to any other sub-system. In case of failure in one part of an integrated navigational system,** it shall be possible to operate each other individual item of equipment or part of the system separately.

Regulation 20

Voyage data recorders

- 1 To assist in casualty investigations, ships, when engaged on international voyages, subject to the provisions of regulation 1.4, shall be fitted with a voyage data recorder (VDR) as follows:
- .1 passenger ships constructed on or after 1 July 2002;
 - .2 ro-ro passenger ships constructed before 1 July 2002 not later than the first survey on or after 1 July 2002;
 - .3 passenger ships other than ro-ro passenger ships constructed before 1 July 2002 not later than 1 January 2004; and
 - .4 ships, other than passenger ships, of 3,000 gross tonnage and upwards constructed on or after 1 July 2002.

* Refer to resolution MSC.64(67), annex 1 – Performance standard for Integrated bridge systems.

** Refer to resolution MSC.86(70), annex 3 – Performance standard for Integrated navigational systems.

2. Administrations may exempt ships, other than ro-ro passenger ships, constructed before 1 July 2002 from being fitted with a VDR where it can be demonstrated that interfacing a VDR with the existing equipment on the ship is unreasonable and impracticable.

Regulation 21

International Code of Signals

All ships which, in accordance with the present Convention, are required to carry a radio installation shall carry the International Code of Signals as may be amended by the Organization. The Code shall also be carried by any other ship which, in the opinion of the Administration, has a need to use it.

Regulation 22

Navigation bridge visibility

1 Ships of not less than 45 m in length as defined in regulation III/3.12, constructed on or after 1 July 1998, shall meet the following requirements:

- .1 The view of the sea surface from the conning position shall not be obscured by more than two ship lengths, or 500 m, whichever is the less, forward of the bow to 10° on either side under all conditions of draught, trim and deck cargo;
- .2 No blind sector caused by cargo, cargo gear or other obstructions outside of the wheelhouse forward of the beam which obstructs the view of the sea surface as seen from the conning position, shall exceed 10° . The total arc of blind sectors shall not exceed 20° . The clear sectors between blind sectors shall be at least 5° . However, in the view described in .1, each individual blind sector shall not exceed 5° ;
- .3 The horizontal field of vision from the conning position shall extend over an arc of not less than 225° , that is from right ahead to not less than 22.5° , abaft the beam on either side of the ship;
- .4 From each bridge wing the horizontal field of vision shall extend over an arc at least 225° , that is from at least 45° on the opposite bow through right ahead and then from right ahead to right astern through 180° on the same side of the ship;
- .5 From the main steering position the horizontal field of vision shall extend over an arc from right ahead to at least 60° on each side of the ship;
- .6 The ship's side shall be visible from the bridge wing;
- .7 The height of the lower edge of the navigation bridge front windows above the bridge deck shall be kept as low as possible. In no case shall the lower edge present an obstruction to the for-

- ward view as described in this regulation;
- .8 The upper edge of the navigation bridge front windows shall allow a forward view of the horizon, for a person with a height of eye of 1,800 mm above the bridge deck at the conning position, when the ship is pitching in heavy seas. The Administration, if satisfied that a 1,800 mm height of eye is unreasonable and impractical, may allow reduction of the height of eye but not less than 1,600 mm;
 - .9 Windows shall meet the following requirements:
 - .9.1 To help avoid reflections, the bridge front windows shall be inclined from the vertical plane top out, at an angle of not less than 10° and not more than 25°.
 - .9.2 Framing between navigation bridge windows shall be kept to a minimum and not be installed immediately forward of any work station.
 - .9.3 Polarized and tinted windows shall not be fitted.
 - .9.4 A clear view through at least two of the navigation bridge front windows and, depending on the bridge configuration, an additional number of clear-view windows shall be provided at all times, regardless of weather conditions.
2. Ships constructed before 1 July 1998 shall, where practicable, meet the requirements of paragraphs 1.1 and 1.2. However, structural alterations or additional equipment need not be required.
- 3 On ships of unconventional design which, in the opinion of the Administration, cannot comply with this regulation, arrangements shall be provided to achieve a level of visibility that is as near as practical to that prescribed in this regulation.

Regulation 23

Pilot transfer arrangements

1 Application

- 1.1 Ships engaged on voyages in the course of which pilots are likely to be employed shall be provided with pilot transfer arrangements.
- 1.2 Equipment and arrangements for pilot transfer which are installed on or after 1 January 1994 shall comply with the requirements of this regulation, and due regard shall be paid to the standards adopted by the Organization*.
- 1.3 Equipments and arrangements for pilot transfer which are provided on ships before 1 January 1994 shall at least comply with the requirements of regulation 17 of the International Convention for the Safety

* Refer to the Recommendation on pilot transfer arrangements, adopted by the Organization by resolution A.889(21), MSC/Circ.568/Rev.1: Required Boarding Arrangement for Pilots.

of Life at Sea, 1974 in force prior to that date, and due regard shall be paid to the standards adopted by the Organization prior to that date.

1.4 Equipment and arrangements which are replaced after 1 January 1994 shall, in so far as is reasonable and practicable, comply with the requirements of this regulation.

2 General

2.1 All arrangements used for pilot transfer shall efficiently fulfill their purpose of enabling pilots to embark and disembark safely. The appliances shall be kept clean, properly maintained and stowed and shall be regularly inspected to ensure that they are safe to use. They shall be used solely for the embarkation and disembarkation of personnel.

2.2 The rigging of the pilot transfer arrangements and the embarkation of a pilot shall be supervised by a responsible officer having means of communication with the navigation bridge who shall also arrange for the escort of the pilot by a safe route to and from the navigation bridge. Personnel engaged in rigging and operating any mechanical equipment shall be instructed in the safe procedures to be adopted and the equipment shall be tested prior to use.

3 Transfer arrangements

3.1 Arrangements shall be provided to enable the pilot to embark and disembark safely on either side of the ship.

3.2 In all ships where the distance from sea level to the point of access to, or egress from, the ship exceeds 9 m, and when it is intended to embark and disembark pilots by means of the accommodation ladder, or by means of mechanical pilot hoists or other equally safe and convenient means in conjunction with a pilot ladder, the ship shall carry such equipment on each side, unless the equipment is capable of being transferred for use on either side.

3.3 Safe and convenient access to, and egress from, the ship shall be provided by either:

- .1 a pilot ladder requiring a climb of not less than 1.5 m and not more than 9 m above the surface of the water so positioned and secured that:
 - .1.1 it is clear of any possible discharges from the ship;
 - .1.2 it is within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length of the ship;
 - .1.3 each step rests firmly against the ship's side; where constructional features, such as rubbing bands, would prevent the implementation of this provision, special arrangements shall, to the satisfaction of the Administration, be made to ensure that persons are able to embark and disembark safely;
 - .1.4 the single length of pilot ladder is capable of reaching the water from the point of access to, or egress from, the ship and due allowance is made for all conditions of loading and trim of the ship, and for an adverse list of 15°; the securing strong

- point, shackles and securing ropes shall be at least as strong as the side ropes;
- .2 an accommodation ladder in conjunction with the pilot ladder, or other equally safe and convenient means, whenever the distance from the surface of the water to the point of access to the ship is more than 9 m. The accommodation ladder shall be sited leading aft. When in use, the lower end of the accommodation ladder shall rest firmly against the ship's side within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length and clear of all discharges; or
- .3 a mechanical pilot hoist so located that it is within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length of the ship and clear of all discharges.

4 Access to the ship's deck

Means shall be provided to ensure safe, convenient and unobstructed passage for any person embarking on, or disembarking from, the ship between the head of the pilot ladder, or of any accommodation ladder or other appliance, and the ship's deck. Where such passage is by means of:

- .1 a gateway in the rails or bulwark, adequate handholds shall be provided;
- .2 a bulwark ladder, two handhold stanchions rigidly secured to the ship's structure at or near their bases and at higher points shall be fitted. The bulwark ladder shall be securely attached to the ship to prevent overturning.

5 Shiplide doors

Shiplide doors used for pilot transfer shall not open outwards.

6 Mechanical pilot hoists

6.1 The mechanical pilot hoist and its ancillary equipment shall be of a type approved by the Administration. The pilot hoist shall be designed to operate as a moving ladder to lift and lower one person on the side of the ship, or as a platform to lift and lower one or more persons on the side of the ship. It shall be of such design and construction as to ensure that the pilot can be embarked and disembarked in a safe manner, including a safe access from the hoist to the deck and vice versa. Such access shall be gained directly by a platform securely guarded by handrails.

6.2 Efficient hand gear shall be provided to lower or recover the person or persons carried, and kept ready for use in the event of power failure.

6.3 The hoist shall be securely attached to the structure of the ship. Attachment shall not be solely by means of the ship's side rails. Proper and strong attachment points shall be provided for hoists of the portable type on each side of the ship.

6.4 If belting is fitted in the way of the hoist position, such belting shall be cut back sufficiently to allow the hoist to operate against the ship's side.

6.5 A pilot ladder shall be rigged adjacent to the hoist and available for immediate use so that access to it is available from the hoist at any point of its travel. The pilot ladder shall be capable of reaching the sea level from its own point of access to the ship.

6.6 The position on the ship's side where the hoist will be lowered shall be indicated.

6.7 An adequate protected stowage position shall be provided for the portable hoist. In very cold weather, to avoid the danger of ice formation, the portable hoist shall not be rigged until its use is imminent.

7 Associated equipment

7.1 The following associated equipment shall be kept at hand ready for immediate use when persons are being transferred;

- .1 two man-ropes of not less than 28 mm in diameter properly secured to the ship if required by the pilot;
- .2 a lifebuoy equipped with a self-igniting light;
- .3 a heaving line.

7.2 When required by paragraph 4, stanchions and bulwark ladders shall be provided.

8 Lighting

Adequate lighting shall be provided to illuminate the transfer arrangements overside, the position on deck where a person embarks or disembarks and the controls of the mechanical pilot hoist.

Regulation 24

Use of heading and/or track control systems

1 In areas of high traffic density, in conditions of restricted visibility and in all other hazardous navigational situations where heading and/or track control systems are in use, it shall be possible to establish manual control of the ship's steering immediately.

2 In circumstances as above, the officer in charge of the navigational watch shall have available without delay the services of a qualified helmsperson who shall be ready at all times to take over steering control.

3 The change-over from automatic to manual steering and vice versa shall be made by or under the supervision of a responsible officer.

4 The manual steering shall be tested after prolonged use of heading and/or track control systems, and before entering areas where navigation demands special caution.

Regulation 25

Operation of main source of electrical power and steering gear

In areas where navigation demands special caution, ships shall have more than one steering gear power unit in operation when such units are capable of simultaneous operation.

Regulation 26

Steering gear: Testing and drills

1 Within 12 hours before departure, the ship's steering gear shall be checked and tested by the ship's crew. The test procedure shall include, where applicable, the operation of the following:

- .1 the main steering gear;
- .2 the auxiliary steering gear;
- .3 the remote steering gear control systems;
- .4 the steering positions located on the navigation bridge;
- .5 the emergency power supply;
- .6 the rudder angle indicators in relation to the actual position of the rudder;
- .7 the remote steering gear control system power failure alarms;
- .8 the steering gear power unit failure alarms; and
- .9 automatic isolating arrangements and other automatic equipment.

2 The checks and tests shall include:

- .1 the full movement of the rudder according to the required capabilities of the steering gear;
- .2 a visual inspection for the steering gear and its connecting linkage; and
- .3 the operation of the means of communication between the navigation bridge and steering gear compartment.

3.1 Simple operating instructions with a block diagram showing the change-over procedures for remote steering gear control systems and steering gear power units shall be permanently displayed on the navigation bridge and in the steering compartment.

3.2 All ships' officers concerned with the operation and/or maintenance of steering gear shall be familiar with the operation of the steering systems fitted on the ship and with the procedures for changing from one system to another.

4 In addition to the routine checks and tests prescribed in paragraphs 1 and 2, emergency steering drills shall take place at least once every three months in order to practise emergency steering procedures. These drills shall include direct control within the steering gear compartment, the communications procedure with the navigation bridge and, where applicable the operation of alternative power supplies.

5 The Administration may waive the requirements to carry out the checks and tests prescribed in paragraphs 1 and 2 for ships which regularly engage on voyages of short duration. Such ships shall carry out these checks and tests at least once every week.

6 The date upon which the checks and tests prescribed in paragraphs 1 and 2 are carried out and the date and details of emergency steering drills carried out under paragraph 4, shall be recorded.

Regulation 27

Nautical charts and nautical publications

Nautical charts and nautical publications, such as sailing directions, lists of lights, notices to mariners, tide tables and all other nautical publications necessary for the intended voyage, shall be adequate and up to date.

Regulation 28

Records of navigational activities

All ships engaged on international voyages shall keep on board a record of navigational activities and incidents which are of importance to safety of navigation and which must contain sufficient detail to restore a complete record of the voyage, taking into account the recommendations adopted by the Organization*. When such information is not maintained in the ship's log-book, it shall be maintained in another form approved by the Administration.

Regulation 29

Life-saving signals to be used by ships, aircraft or persons in distress

An illustrated table describing the life-saving signals** shall be readily available to the officer of the watch of every ship to which this chapter applies. The signals shall be used by ships or persons in distress when communicating with life-saving stations, maritime rescue units and aircraft engaged in search and rescue operations.

Regulation 30

Operational limitations

1 This regulation applies to all passenger ships to which chapter I applies.

2 A list of all limitations on the operation of a passenger ship including exemptions from any of these regulations, restrictions in operating areas, weather restrictions, sea state restrictions, restrictions in permissi-

* Refer to the Guidelines for recording events related to navigation to be developed by the Organization.

** Such life-saving signals are described in the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR) Vol.III, Mobile Facilities and illustrated in the International Code of Signals, as amended pursuant to resolution A.80(IV).

ble loads, trim, speed and any other limitations, whether imposed by the Administration or established during the design or the building stages, shall be compiled before the passenger ship is put in service. The list, together with any necessary explanations, shall be documented in a form acceptable to the Administration, which shall be kept on board readily available to the master. The list shall be kept updated. If the language used is not English or French, the list shall be provided in one of the two languages.

Regulation 31

Danger messages

1 The master of every ship which meets with dangerous ice, a dangerous derelict, or any other direct danger to navigation, or a tropical storm, or encounters sub-freezing air temperatures associated with gale force winds causing severe ice accretion on superstructures, or winds of force 10 or above on the Beaufort scale for which no storm warning has been received, is bound to communicate the information by all means at his disposal to ships in the vicinity, and also to the competent authorities. The form in which the information is sent is not obligatory. It may be transmitted either in plain language (preferably English) or by means of the International Code of Signals.

2 Each Contracting Government will take all steps necessary to ensure that when intelligence of any of the dangers specified in paragraph 1 is received, it will be promptly brought to the knowledge of those concerned and communicated to other interested Governments.

3 The transmission of messages respecting the dangers specified is free of cost to the ships concerned.

4 All radio messages issued under paragraph 1 shall be preceded by the safety signal, using the procedure as prescribed by the Radio Regulations as defined in regulation IV/2.

Regulation 32

Information required in danger messages

The following information is required in danger messages:

- 1 Ice, derelicts and other direct dangers to navigation:
 - .1 The kind of ice, derelict or danger observed.
 - .2 The position of the ice, derelict or danger when last observed.
 - .3 The time and date (Universal Co-ordinated Time) when the danger was last observed.

2 Tropical cyclones (storms)*

- .1 A statement that a tropical cyclone has been encountered. This obligation should be interpreted in a broad spirit, and information transmitted whenever the master has good reason to believe that a tropical cyclone is developing or exists in the neighbourhood.
- .2 Time, date (Universal Co-ordinated Time) and position of ship when the observation was taken.
- .3 As much of the following information as is practicable should be included in the message:
 - barometric pressure,** preferably corrected (stating millibars, millimetres, or inches, and whether corrected or uncorrected);
 - barometric tendency (the change in barometric pressure during the past three hours);
 - true wind direction;
 - wind force (Beaufort scale);
 - state of the sea (smooth, moderate, rough, high);
 - swell (slight, moderate, heavy) and the true direction from which it comes. Period or length of swell (short, average, long) would also be of value;
 - true course and speed of ship.

Subsequent observations

3 When a master has reported a tropical cyclone or other dangerous storm, it is desirable but not obligatory, that further observations be made and transmitted hourly, if practicable, but in any case at intervals of not more than 3 hours, so long as the ship remains under the influence of the storm.

4 Winds of force 10 or above on the Beaufort scale for which no storm warning has been received. This is intended to deal with storms other than the tropical cyclones referred to in paragraph 2; when such a storm is encountered, the message should contain similar information to that listed under the paragraph but excluding the details concerning sea and swell.

5 Sub-freezing air temperatures associated with gale force winds causing severe ice accretion on superstructures:

- .1 Time and date (Universal Co-ordinated Time).
- .2 Air temperature.

* The term tropical cyclone is the generic term used by national meteorological services of the World Meteorological Organization. The term hurricane, typhoon, cyclone, severe tropical storm, etc., may also be used, depending on the geographical location.

** The standard international unit for barometric pressure is the hectopascal (hPa) which is numerically equivalent to the millibar (mbar).

- .3 Sea temperature (if practicable).
- .4 Wind force and direction.

Examples

Ice

TTT ICE. LARGE BERG SIGHTED IN 4506 N, 4410W, AT 0800 UTC. MAY 15.

Derelicts

TTT DERELICT. OBSERVED DERELICT ALMOST SUBMERGED IN 4006 N, 1243 W, AT 1630 UTC. APRIL 21.

Danger to navigation

TTT NAVIGATION. ALPHA LIGHTSHIP NOT ON STATION. 1800 UTC. JANUARY 3.

Tropical cyclone

TTT STORM. 0030 UTC. AUGUST 18. 2004 N, 11354 E. BAROMETER CORRECTED 994 MILLIBARS, TENDENCY DOWN 6 MILLIBARS. WIND NW, FORCE 9, HEAVY SQUALLS. HEAVY EASTERLY SWELL. COURSE 067, 5 KNOTS.

TTT STORM. APPEARANCES INDICATE APPROACH OF HURRICANE. 1300 UTC. SEPTEMBER 14. 2200 N, 7236 W. BAROMETER CORRECTED 29.64 INCHES, TENDENCY DOWN .015 INCHES. WIND NE, FORCE 8, FREQUENT RAIN SQUALLS. COURSE 035, 9 KNOTS.

TTT STORM. CONDITIONS INDICATE INTENSE CYCLONE HAS FORMED. 0200 UTC. MAY 4. 1620 N, 9203 E. BAROMETER UNCORRECTED 753 MILLIMETRES, TENDENCY DOWN 5 MILLIMETRES. WIND S BY W, FORCE 5. COURSE 300, 8 KNOTS.

TTT STORM. TYPHOON TO SOUTHEAST. 0300 UTC. JUNE 12. 1812 N, 12605 E. BAROMETER FALLING RAPIDLY. WIND INCREASING FROM N.

TTT STORM. WIND FORCE 11, NO STORM WARNING RECEIVED. 0300 UTC. MAY 4. 4830 N, 30 W. BAROMETER CORRECTED 983 MILLIBARS, TENDENCY DOWN 4 MILLIBARS. WIND SW, FORCE 11 VEERING. COURSE 260, 6 KNOTS.

Icing

TTT EXPERIENCING SEVERE ICING. 1400 UTC. MARCH 2. 69 N, 10 W. AIR TEMPERATURE 18°F (-7.8°C). SEA TEMPERATURE 29°F (-1.7°C). WIND NE, FORCE 8.

Regulation 33

Distress messages: Obligations and procedures

1 The master of a ship at sea which is in a position to be able to provide assistance on receiving a signal from any source that persons are in

distress at sea, is bound to proceed with all speed to their assistance, if possible informing them or the search and rescue service that the ship is doing so. If the ship receiving the distress alert is unable or, in the special circumstances of the case, considers it unreasonable or unnecessary to proceed to their assistance, the master must enter in the log-book the reason for failing to proceed to the assistance of the persons in distress, taking into account the recommendation of the Organization, to inform the appropriate search and rescue service accordingly.

2 The master of a ship in distress or the search and rescue service concerned, after consultation, so far as may be possible, with the masters of ships which answer the distress alert, has the right to requisition one or more of those ships as the master of the ship in distress or the search and rescue service considers best able to render assistance, and it shall be the duty of the master or masters of the ship or ships requisitioned to comply with the requisition by continuing to proceed with all speed to the assistance of persons in distress.

3 Masters of ships shall be released from the obligation imposed by paragraph 1 on learning that their ships have not been requisitioned and that one or more other ships have been requisitioned and are complying with the requisition. This decision shall, if possible be communicated to the other requisitioned ships and to the search and rescue service.

4 The master of a ship shall be released from the obligation imposed by paragraph 1 and, if his ship has been requisitioned, from the obligation imposed by paragraph 2 on being informed by the persons in distress or by the search and rescue service or by the master of another ship which has reached such persons that assistance is no longer necessary.

5 The provisions of this regulation do not prejudice the Convention for the Unification of Certain Rules of Law Relating to Assistance and Salvage at Sea, signed at Brussels on 23 September 1910, particularly the obligation to render assistance imposed by article 11 of that Convention.*

Regulation 34

Safe navigation and avoidance of dangerous situations

1 Prior to proceeding to sea, the master shall ensure that the intended voyage has been planned using the appropriate nautical charts and nau-

* International Convention on Salvage 1989 done at London on 28 April 1989 entered into force on 14 July 1996.

tical publications for the area concerned, taking into account the guidelines and recommendations developed by the Organization.*

- 2 The voyage plan shall identify a route which:
 - .1 takes into account any relevant ships' routeing systems;
 - .2 ensures sufficient sea room for the safe passage of the ship throughout the voyage;
 - .3 anticipates all known navigational hazards and adverse weather conditions; and
 - .4 takes into account the marine environmental protection measures that apply, and avoids as far as possible actions and activities which could cause damage to the environment.

3 The owner, the charterer, or the company, as defined in regulation IX/1, operating the ship or any other person, shall not prevent or restrict the master of the ship from taking or executing any decision which, in the master's professional judgement, is necessary for safe navigation and protection of the marine environment.

Regulation 35

Misuse of distress signals

The use of an international distress signal, except for the purpose of indicating that a person or persons are in distress, and the use of any signal which may be confused with an international distress signal, are prohibited.

Appendix to chapter V

Rules for the management, operation and financing of the North Atlantic Ice Patrol

- 1 In these Rules:
 - .1 Ice season means the annual period between February 15 and July 1.
 - .2 Region of icebergs guarded by the ice patrol means the south-eastern, southern and south-western limits of the region of icebergs in the vicinity of the Grand Banks of Newfoundland.
 - .3 Routes passing through regions of icebergs guarded by the Ice Patrol means:
 - .3.1 routes between Atlantic Coast ports of Canada (including inland ports approached from the North Atlantic through the Gut of Canso and Cabot Straits) and ports of Europe, Asia or Africa approached from the North Atlantic through or north

* Refer to the Guidelines for Voyage Planning, adopted by the Organization by resolution A.893(21).

- of the Straits of Gibraltar (except routes which pass south of the extreme limits of ice of all types).
- .3.2 routes via Cape Race, Newfoundland between Atlantic Coast ports of Canada (including inland ports approached from the North Atlantic through the Gut of Canso and Cabot Straits) west of Cape Race, Newfoundland and Atlantic Coast ports of Canada north of Cape Race, Newfoundland.
 - .3.3 routes between Atlantic and Gulf Coast ports of the United States of America inland ports approached from the North Atlantic through the Gut of Canso and Cabot straits) and ports of Europe, Asia or Africa approached from the North Atlantic through or north of the Straits of Gibraltar (except routes which pass south of the extreme limits of ice of all types).
 - .3.4 routes via Cape Race, Newfoundland between Atlantic and Gulf Coast ports of the United States of America (including inland ports approached from the North Atlantic through the Gut of Canso and Cabot Straits) and Atlantic Coast ports of Canada north of Cape Race, Newfoundland.
 - .4 Extreme limits of ice of all types in the North Atlantic Ocean is defined by a line connecting the following points:

A – 42°23'.00N, 59°25'.00W	J – 39°49'.00N, 41°00'.00W
B – 41°23'.00N, 57°00'.00W	K – 40°39'.00N, 39°00'.00W
C – 40°47'.00N, 55°00'.00W	L – 41°19'.00N, 38°00'.00W
D – 40°07'.00N, 53°00'.00W	M – 43°00'.00N, 37°27'.00W
E – 39°18'.00N, 49°39'.00W	N – 44°00'.00N, 37°29'.00W
F – 38°00'.00N, 47°35'.00W	O – 46°00'.00N, 37°55'.00W
G – 37°41'.00N, 46°40'.00W	P – 48°00'.00N, 38°28'.00W
H – 38°00'.00N, 45°33'.00W	Q – 50°00'.00N, 39°07'.00W
I – 39°05'.00N, 43°00'.00W	R – 51°25'.00N, 39°45'.00W
 - .5 Managing and operating means maintaining, administering and operating the Ice Patrol, including the dissemination of information received therefrom.
 - .6 Contributing Government means a Contracting Government undertaking to contribute to the costs of the ice patrol service pursuant to these Rules.

2 Each Contracting Government specially interested in these services whose ships pass through the region of icebergs during the ice season undertakes to contribute to the Government of the United States of America its proportionate share of the costs for the management and operation of the ice patrol service. The contribution to the Government of the United States of America shall be based on the ratio which the average annual gross tonnage of that contributing Government's ships passing through the region of icebergs guarded by the Ice Patrol during the previous three ice seasons bears to the combined average annual gross tonnage of all ships that passed through the region of icebergs guarded by the Ice Patrol during the previous three ice seasons.

3 All contributions shall be calculated by multiplying the ratio described in paragraph 2 by the average actual annual cost incurred by the Governments of the United States of America and Canada of managing and operating ice patrol services during the previous three years. This ratio shall be computed annually, and shall be expressed in terms of a lump sum per-annum fee.

4 Each of the contributing Governments has the right to alter or discontinue its contribution, and other interested Governments may undertake to contribute to the expense. The contributing Government which avails itself of this right will continue to be responsible for its current contribution up to 1 September following the date of giving notice of intention to alter or discontinue its contribution. To take advantage of the said right it must give notice to the managing Government at least six months before the said 1 September.

5 Each contributing Government shall notify the Secretary-General of its undertaking pursuant to paragraph 2, who shall notify all Contracting Governments.

6 The Government of the United States of America shall furnish annually to each contributing Government a statement of the total cost incurred by the Governments of the United States of America and Canada of managing and operating the Ice Patrol for that year and of the average percentage share for the past three years of each contributing Government.

7 The managing government shall publish annual accounts including a statement of costs incurred by the governments providing the services for the past three years and the total gross tonnage using the service for the past three years. The accounts shall be publicly available. Within three months after having received the cost statement, contributing Governments may request more detailed information regarding the costs incurred in managing and operating the Ice Patrol.

8 These Rules shall be operative beginning with the ice season of 2002.”

CHAPTER IX

MANAGEMENT FOR THE SAFE OPERATION OF SHIPS

Regulation 1

Definitions

8 In paragraph 8, the reference “X/1.2” is replaced by “X/1”.

Regulation 3

Safety management requirements

- 9 At the end of existing paragraph 1, the following text is added:
 “For the purpose of this regulation, the requirements of the Code shall be treated as mandatory.”

Regulation 6

Verification and control

- 10 In existing paragraph 6.2, the words “Subject to the provisions of paragraph 3 of this regulation” are deleted.
- 11 Existing paragraph 6.3 is deleted.

CHAPTER X

SAFETY MEASURES FOR HIGH-SPEED CRAFT

Regulation 1

Definitions

- 12 Existing paragraph 1 is replaced by the following:
 “For the purpose of this chapter:
 1 High-Speed Craft Code, 1994 (1994 HSC Code) means the International Code of Safety for High-Speed Craft adopted by the Maritime Safety Committee of the Organization by resolution MSC.36(63), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the Annex other than chapter I.
 2 High-Speed Craft Code, 2000 (2000 HSC Code) means the International Code of Safety for High-Speed Craft, 2000 adopted by the Maritime Safety Committee of the Organization by resolution MSC.97(73), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the Annex other than chapter I.”
- 13 Existing paragraph 2 is replaced by the following:
 “3 High-speed craft is a craft capable of a maximum speed, in metres per second (m/s), equal to or exceeding:
 $3.7\sqrt{0.1667}$ ”

where:

∇ = volume of displacement corresponding to the design waterline (m³),
excluding craft the hull of which is supported completely clear above the water surface in non-displacement mode by aerodynamic forces generated by ground effect.”

14 The existing paragraphs 3 and 4 are renumbered as paragraphs 4 and 5.

15 In the renumbered paragraph 5, in subparagraph .2, the figure “1%” is replaced by “3%”.

Regulation 2

Application

16 In paragraph 2, the date “1 January 1996” is replaced by “1 July 2002” in two places.

Regulation 3

Requirements for high-speed craft

17 Existing paragraph 1 is replaced by the following:

“1 Notwithstanding the provisions of chapters I to IV and regulations V/18, 19 and 20:

- .1 a high-speed craft constructed on or after 1 January 1996 but before 1 July 2002 which complies with the requirements of the High-Speed Craft Code, 1994 in its entirety and which has been surveyed and certified as provided in that Code shall be deemed to have complied with the requirements of chapters I to IV and regulations V/18, 19 and 20. For the purpose of this regulation, the requirements of that Code shall be treated as mandatory.
- .2 a high-speed craft constructed on or after 1 July 2002 which complies with the requirements of the High-Speed Craft Code, 2000 in its entirety and which has been surveyed and certified as provided in that Code shall be deemed to have complied with the requirements of chapters I to IV and regulations V/18, 19 and 20.”

Appendix

Record of Equipment for the Passenger Ship Safety Certificate (Form P)
18 Existing sections 5 and 6 are deleted and a new section 5 is inserted as follows:

“5 Details of navigational systems and equipment

	Item	Actual provision
1.1	Standard magnetic compass*	.....
1.2	Spare magnetic compass*	.....
1.3	Gyro compass*	.....
1.4	Gyro compass heading repeater*	.....
1.5	Gyro compass bearing repeater*	.....
1.6	Heading or track control system*	.....
1.7	Pelorus or compass bearing device*	.....
1.8	Means of correcting heading and bearings	.....
1.9	Transmitting heading device (THD)*	.....
2.1	Nautical charts/Electronic chart display and information system (ECDIS)**	.....
2.1	Back up arrangements for ECDIS	.....
2.3	Nautical publications	.....
2.4	Back up arrangements for electronic nautical publications	.....
3.1	Receiver for a global navigation satellite system/terrestrial radionavigation system*, **	.....
3.2	9 GHz radar*	.....
3.3	Second radar (3 GHz/ 9 GHz**)*	.....
3.4	Automatic radar plotting aid (ARPA)*	.....
3.5	Automatic tracking aid*	.....
3.6	Second automatic tracking aid*	.....
3.7	Electronic plotting aid*	.....
4	Automatic identification system (AIS)	.....
5	Voyage data recorder (VDR)	.....
6.1	Speed and distance measuring device (through the water)*	.....
6.2	Speed and distance measuring device (over the ground in the forward and athwartship direction)*	.....
7	Echo sounding device*	.....
8.1	Rudder, propeller, thrust, pitch and operational mode indicator*	.....
8.2	Rate of turn indicator*	.....
9	Sound reception system*	.....
10	Telephone to emergency steering position*	.....
11	Daylight signalling lamp*	.....
12	Radar reflector*	.....
13	International Code of Signals	.....

* Alternative means of meeting this requirement are permitted under regulation V/ 19. In case of other means they shall be specified.

** Delete as appropriate.”

Record of Equipment for the Cargo Ship Safety Equipment Certificate
(Form E)

19 Existing section 3 and related footnote are deleted and a new section 3 is inserted as follows:

“3 Details of navigational systems and equipment

	Item	Actual provision
1.1	Standard magnetic compass*	.....
1.2	Spare magnetic compass*	.....
1.3	Gyro compass*	.....
1.4	Gyro compass heading repeater*	.....
1.5	Gyro compass bearing repeater*	.....
1.6	Heading or track control system*	.....
1.7	Pelorus or compass bearing device*	.....
1.8	Means of correcting heading and bearings	.....
1.9	Transmitting heading device (THD)*	.....
2.1	Nautical charts/Electronic chart display and information system (ECDIS)**	.....
2.1	Back up arrangements for ECDIS	.....
2.3	Nautical publications	.....
2.4	Back up arrangements for electronic nautical publications	.....
3.1	Receiver for a global navigation satellite system/terrestrial radionavigation system*, **	.....
3.2	9 GHz radar*	.....
3.3	Second radar (3 GHz/ 9 GHz**)*	.....
3.4	Automatic radar plotting aid (ARPA)*	.....
3.5	Automatic tracking aid*	.....
3.6	Second automatic tracking aid*	.....
3.7	Electronic plotting aid*	.....
4	Automatic identification system (AIS)	.....
5	Voyage data recorder (VDR)	.....
6.1	Speed and distance measuring device (through the water)*	.....
6.2	Speed and distance measuring device (over the ground in the forward and athwartship direction)*	.....
7	Echo sounding device*	.....
8.1	Rudder, propeller, thrust, pitch and operational mode indicator*	.....
8.2	Rate of turn indicator*	.....

	Item	Actual provision
9	Sound reception system*	.....
10	Telephone to emergency steering position*	.....
11	Daylight signalling lamp*	.....
12	Radar reflector*	.....
13	International Code of Signals	.....

* Alternative means of meeting this requirement are permitted under regulation V/19. In case of other means they shall be specified.

** Delete as appropriate.”

Resolutie MSC.117(74) van 6 juni 2001

Bij Resolutie MSC.117(74) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 6 juni 2001 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 juli 2002 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 januari 2003 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

Resolution MSC.117(74)

(adopted on 6 June 2001)

Adoption of amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

The Maritime Safety Committee,

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974, hereinafter referred to as “the Convention”, concerning the procedures for amending the Annex to the Convention, other than the provisions of chapter I thereof,

Noting that amendment 30 to the International Maritime Dangerous Goods (IMDG) Code (disseminated by means of MSC/Circ.961), incorporates, inter alia, a new transport schedule 14 into that Code,

Recognizing the need to amend the relevant SOLAS chapter VII requirements to align them with the aforementioned IMDG Code amendment 30,

Having considered, at its seventy-fourth session, amendments to the Convention proposed and circulated in accordance with article VIII(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2002 unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;

3. Invites Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2003 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex**Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended**

CHAPTER VII

CARRIAGE OF DANGEROUS GOODS

PART D

SPECIAL REQUIREMENTS FOR THE CARRIAGE OF PACKAGED IRRADIATED NUCLEAR FUEL, PLUTONIUM AND HIGH-LEVEL RADIOACTIVE WASTES ON BOARD SHIPS

Regulation 14

Definitions

In paragraph 2 of the regulation, the words “schedule 10, 11, 12 or 13” are replaced by the words “transport schedule 10, 11, 12, 13 or 14”.

Resolutie MSC.123(75) van 24 mei 2002

Bij Resolutie MSC.123(75) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 24 mei 2002 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 juli 2003 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 januari 2004 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

Resolution MSC.123(75)**(adopted on 24 May 2002)****Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended**

The Maritime Safety Committee,

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as "the Convention"), concerning the amendment procedure applicable to the Annex to the Convention, other than to the provisions of chapter I thereof,

Having considered, at its seventy-fifth session, amendments to the Convention, proposed and circulated in accordance with article VII-I(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2003, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. Invites SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2004 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex**Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended**

CHAPTER IV

RADIOCOMMUNICATIONS

Regulation 1

Application

- 1 Paragraphs 3, 4, 5, 6 and 7 are deleted.
- 2 Existing paragraph 8 is renumbered as paragraph 3.

Regulation 3

Exemptions

- 3 The word “; or” at the end of paragraph 2.2 is replaced by full stop(.).
- 4 Paragraph 2.3 is deleted.

Regulation 4

Functional requirements

- 5 In paragraph 1.6, the reference to “V/12(g) and (h)” is replaced by “V/19.2.3.2”.

Regulation 7

Radio equipment: General

- 6 Paragraphs 2, 3 and 4 are deleted.
- 7 Existing paragraph 5 is renumbered as paragraph 2.

Regulation 12

Watches

- 8 Paragraph 4 is deleted.

Regulation 14

Performance standards

- 9 In paragraph 1, in the second sentence, the words “Subject to paragraph 2” are deleted.

10 Paragraph 2 is deleted.

CHAPTER V

SAFETY OF NAVIGATION

Regulation 21

International Code of Signals

- 11 The title of the regulation is replaced by the following:
“International Code of Signals and IAMSAR Manual.”
- 12 The existing paragraph is numbered as paragraph 1.
- 13 A new paragraph 2 is added as follows:
“2 All ships shall carry an up-to-date copy of Volume III of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual.”

CHAPTER VI

CARRIAGE OF CARGOES

Regulation 2

Cargo information

14 In existing paragraph 2.3, the words “regulation VII/2” are replaced by the words “the IMDG Code, as defined in regulation VII/1.1”.

Regulation 5

Stowage and securing

15 In existing paragraph 1, the words “Cargo and cargo units” are replaced by the words “Cargo, cargo units* and cargo transport units**”

16 In existing paragraph 2, the words “cargo carried in cargo unit” are replaced by the words “cargo, cargo units and cargo transport units”

17 In existing paragraph 4, the words “cargo units” are replaced by the words “cargo units and cargo transport units” (in two places).

18 In existing paragraph 5, the word “Containers” is replaced by the words “Freight containers” and in the last line, after “(CSC)”, at the end of the sentence, the words “,as amended” are added.

* Refer to the Code of Safe Practice for Cargo Stowage and Securing, adopted by the Organization by resolution A.714(17), as amended.

** Refer to the International Maritime Dangerous Goods (IMDG) Code, adopted by the Organization by resolution MSC.122(75).

19 Existing paragraph 6 is replaced by the following:

“All cargoes, other than solid and liquid bulk cargoes, cargo units and cargo transport units shall be loaded, stowed and secured throughout the voyage in accordance with the Cargo Securing Manual approved by the Administration. In ships with ro-ro spaces, as defined in regulation II-2/3.41, all securing of such cargoes, cargo units and cargo transport units, in accordance with the Cargo Securing Manual, shall be completed before the ship leaves the berth. The Cargo Securing Manual shall be drawn up to a standard at least equivalent to relevant guidelines developed by the Organization*.”

Regulation 6

Acceptability for shipment

20 In existing paragraph 3, the words “regulation VII/2” are replaced by the words “the IMDG Code, as defined in regulation VII/1.1”

CHAPTER VII

CARRIAGE OF DANGEROUS GOODS

21 Existing part A is replaced by the following new part A and part A-1:

“PART A

CARRIAGE OF DANGEROUS GOODS IN PACKAGED FORM

Regulation 1

Definitions

For the purpose of this chapter, unless expressly provided otherwise:

1 IMDG Code means the International Maritime Dangerous Goods (IMDG) Code adopted by the Maritime Safety Committee of the Organization by resolution MSC.122(75), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the Annex other than chapter I.

2 Dangerous goods mean the substances, materials and articles covered by the IMDG Code.

* Refer to the Guidelines on the preparation of the cargo securing manual (MSC/Circ.745).

3 Packaged form means the form of containment specified in the IMDG Code.

Regulation 2

*Application**

1 Unless expressly provided otherwise, this part applies to the carriage of dangerous goods in packaged form in all ships to which the present regulations apply and in cargo ships of less than 500 gross tonnage.

2 The provisions of this part do not apply to ships' stores and equipment.

3 The carriage of dangerous goods in packaged form is prohibited except in accordance with the provisions of this chapter.

4 To supplement the provisions of this part, each Contracting Government shall issue, or cause to be issued, detailed instructions on emergency response and medical first aid relevant to incidents involving dangerous goods in packaged form, taking into account the guidelines developed by the Organization.*

Regulation 3

Requirements for the carriage of dangerous goods

The carriage of dangerous goods in packaged form shall be in compliance with the relevant provisions of the IMDG Code.

Regulation 4

Documents

1 In all documents relating to the carriage of dangerous goods in packaged form by sea, the proper shipping name of the goods shall be used (trade names alone shall not be used) and the correct description given in accordance with the classification set out in the IMDG Code.

* Refer to:

- .1 part D which contains special requirements for the carriage of INF cargo; and
- .2 regulation II-2/19 which contains special requirements for ships carrying dangerous goods.

* Refer to:

- .1 the Emergency Response Procedures for Ships Carrying Dangerous Goods (EmS Guide) (MSC/Circ.1025); and
- .2 the Medical First Aid and the Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG) (MSC/Circ.857); published by the Organization.

2 The transport documents prepared by the shipper shall include, or be accompanied by, a signed certificate or a declaration that the consignment, as offered for carriage, is properly packaged, marked, labelled or placarded, as appropriate, and in proper condition for carriage.

3 The person(s) responsible for the packing/loading of dangerous goods in a cargo transport unit* shall provide a signed container/vehicle packing certificate stating that the cargo in the unit has been properly packed and secured and that all applicable transport requirements have been met. Such a certificate may be combined with the document referred to in paragraph 2.

4 Where there is due cause to suspect that a cargo transport unit in which dangerous goods are packed is not in compliance with the requirements of paragraph 2 or 3, or where a container/vehicle packing certificate is not available, the cargo transport unit shall not be accepted for carriage.

5 Each ship carrying dangerous goods in packaged form shall have a special list or manifest setting forth, in accordance with the classification set out in the IMDG Code, the dangerous goods on board and the location thereof. A detailed stowage plan, which identifies by class and sets out the location of all dangerous goods on board, may be used in place of such a special list or manifest. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority.

Regulation 5

Cargo Securing Manual

Cargo, cargo units** and cargo transport units, shall be loaded, stowed and secured throughout the voyage in accordance with the Cargo Securing Manual approved by the Administration. The Cargo Securing Manual shall be drawn up to a standard at least equivalent to the guidelines developed by the Organization.***

Regulation 6

Reporting of incidents involving dangerous goods

1 When an incident takes place involving the loss or likely loss overboard of dangerous goods in packaged form into the sea, the master, or

* Refer to the International Maritime Dangerous Goods (IMDG) Code, adopted by the Organization by resolution MSC.122(75).

** As defined in the Code of Safe Practice for Cargo Stowage and Securing, adopted by the Organization by resolution A.715(17), as amended.

*** Refer to the Guidelines for the preparation of the cargo securing manual (MSC/Circ.745).

other person having charge of the ship, shall report the particulars of such an incident without delay and to the fullest extent possible to the nearest coastal State. The report shall be drawn up based on general principles and guidelines developed by the Organization.*

2 In the event of the ship referred to in paragraph 1 being abandoned, or in the event of a report from such a ship being incomplete or unobtainable, the company, as defined in regulation IX/1.2, shall, to the fullest extent possible, assume the obligations placed upon the master by this regulation.

PART A-1

CARRIAGE OF DANGEROUS GOODS IN SOLID FORM IN BULK

Regulation 7

Definitions

Dangerous goods in solid form in bulk means any material, other than liquid or gas, consisting of a combination of particles, granules or any larger pieces of material, generally uniform in composition, which is covered by the IMDG Code and is loaded directly into the cargo spaces of a ship without any intermediate form of containment, and includes such materials loaded in a barge on a barge-carrying ship.

Regulation 7-1

*Application***

1 Unless expressly provided otherwise, this part applies to the carriage of dangerous goods in solid form in bulk in all ships, to which the present regulations apply and in cargo ships of less than 500 gross tonnage.

2 The carriage of dangerous goods in solid form in bulk is prohibited except in accordance with the provisions of this part.

3 To supplement the provisions of this part, each Contracting Government shall issue, or cause to be issued, detailed instructions on the safe

* Refer to the General principles for ship reporting systems and ship reporting requirements, including Guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants, adopted by the Organization by resolution A.851(20).

** Refer to regulation II-2/19, which contains special requirements for ships carrying dangerous goods.

carriage of dangerous goods in solid form in bulk* which shall include instructions on emergency response and medical first aid relevant to incidents involving dangerous goods in solid form in bulk, taking into account the guidelines developed by the Organization.**

Regulation 7-2

Documents

1 In all documents relating to the carriage of dangerous goods in solid form in bulk by sea, the bulk cargo shipping name of the goods shall be used (trade names alone shall not be used).

2 Each ship carrying dangerous goods in solid form in bulk shall have a special list or manifest setting forth the dangerous goods on board and the location thereof. A detailed stowage plan, which identifies by class and sets out the location of all dangerous goods on board, may be used in place of such a special list or manifest. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority.

Regulation 7-3

Stowage and segregation requirements

1 Dangerous goods in solid form in bulk shall be loaded and stowed safely and appropriately in accordance with the nature of the goods. Incompatible goods shall be segregated from one another.

2 Dangerous goods in solid form in bulk which are liable to spontaneous heating or combustion shall not be carried unless adequate precautions have been taken to minimize the likelihood of the outbreak of fire.

3 Dangerous goods in solid form in bulk which give off dangerous vapours shall be stowed in a well ventilated cargo space.

Regulation 7-4

Reporting of incidents involving dangerous goods

1 When an incident takes place involving the loss or likely loss overboard of dangerous goods in solid form in bulk into the sea, the master, or other person having charge of the ship, shall report the particulars of

* Refer to the Code of Safe Practice for Solid Bulk Cargoes (BC Code), adopted by the Organization by resolution A.434(XI), as amended.

** Refer to the Medical First Aid Guide for Use in Accidents involving Dangerous Goods (MFAG) (MSC/Circ.857).

such an incident without delay and to the fullest extent possible to the nearest coastal State. The report shall be drawn up based on general principles and guidelines developed by the Organization.*

2 In the event of the ship referred to in paragraph 1 being abandoned, or in the event of a report from such a ship being incomplete or unobtainable, the company, as defined in regulation IX/1.2, shall, to the fullest extent possible, assume the obligations placed upon the master by this regulation..

PART D

SPECIAL REQUIREMENTS FOR THE CARRIAGE OF PACKAGED IRRADIATED NUCLEAR FUEL, PLUTONIUM AND HIGH-LEVEL RADIOACTIVE WASTES ON BOARD SHIPS

Regulation 14

Definitions

- 22 Existing paragraph 2 is replaced by the following:
 “2 INF cargo means packaged irradiated nuclear fuel, plutonium and high-level radioactive wastes carried as cargo in accordance with class 7 of the IMDG Code.”
- 23 Existing paragraph 6 is deleted.

Appendix

Certificates

Record of Equipment for the Passenger Ship Safety Certificate (Form P)

- 24 In section 3, items 7 and 8 and related footnotes are deleted.

Record of Equipment for the Cargo Ship Safety Radio Certificate (Form R)

- 25 In section 2, items 7 and 8 and related footnotes are deleted.
- 26 Section 4 is deleted.

* Refer to the General Principles for Ship Reporting Systems and Ship Reporting Requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and/or marine pollutants adopted by the Organization by resolution A.851(20).

Resolutie 1 van 12 december 2002

De Conferentie van de Verdragsluitende Regeringen die Partij zijn bij het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, heeft op 12 december 2002 in overeenstemming met artikel VIII(c)(ii) van het Verdrag wijzigingen aangenomen bij resolutie 1 van die Conferentie.

De wijzigingen behoeften ingevolge artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

Bij brieven van 8 maart 2004 zijn de wijzigingen medegedeeld aan de Eerste en de Tweede Kamer der Staten-Generaal en aan de Staten van de Nederlandse Antillen en de Staten van Aruba.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 januari 2004 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 juli 2004 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

**Resolution 1 of the Conference of Contracting Governments to
The International Convention for the Safety of Life at Sea, 1974
Adopted on 12 december 2002**

**Adoption of Amendments to the annex to the international
Convention for the Safety of Life at Sea, 1974**

The conference,

Bearing in mind the purposes and principles of the Charter of the United Nations concerning the maintenance of international peace and security and the promotion of friendly relations and co-operation among States,

Deeply concerned about the world-wide escalation of acts of terrorism in all its forms, which endanger or take innocent human lives, jeopardize fundamental freedoms and seriously impair the dignity of human beings,

Being aware of the importance and significance of shipping to the world trade and economy and, therefore, being determined to safeguard the worldwide supply chain against any breach resulting from terrorist attacks against ships, ports, offshore terminals or other facilities,

Considering that unlawful acts against shipping jeopardize the safety and security of persons and property, seriously affect the operation of

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

maritime services and undermine the confidence of the peoples of the world in the safety of maritime navigation,

Considering that the occurrence of such acts is a matter of grave concern to the international community as a whole, while also recognizing the importance of the efficient and economic movement of world trade,

Being convinced of the urgent need to develop international cooperation between States in devising and adopting effective and practical measures, additional to those already adopted by the International Maritime Organization (hereinafter referred to as “the Organization”), to prevent and suppress unlawful acts directed against shipping in its broad sense,

Recalling the United Nations Security Council resolution 1373(2001), adopted on 28 September 2001, requiring States to take measures to prevent and suppress terrorist acts, including calling on States to implement fully anti-terrorist conventions,

Having noted the Co-operative G8 Action on Transport Security (in particular, the Maritime Security section thereof), endorsed by the G8 Leaders during their Summit in Kananaskis, Alberta (Canada) in June 2002,

Recalling article VIII(c) of the International Convention for the Safety of Life at Sea, 1974, as amended (hereinafter referred to as “the Convention”), concerning the procedure for amending the Convention by a Conference of Contracting Governments,

Noting resolution A.924(22) entitled “Review of measures and procedures to prevent acts of terrorism which threaten the security of passengers and crew and the safety of ships”, adopted by the Assembly of the Organization on 20 November 2001, which, inter alia:

(a) recognizes the need for the Organization to review, with the intent to revise, existing international legal and technical measures, and to consider appropriate new measures, to prevent and suppress terrorism against ships and to improve security aboard and ashore in order to reduce the risk to passengers, crew and port personnel on board ships and in port areas and to the vessels and their cargoes; and

(b) requests the Organization’s Maritime Safety Committee, the Legal Committee and the Facilitation Committee under the direction of the Council to undertake, on a high priority basis, a review to ascertain whether there is a need to update the instruments referred to in the pre-ambular paragraphs of the aforesaid resolution and any other relevant IMO instrument under their scope and/or to adopt other security measures and, in the light of such a review, to take action as appropriate;

Having identified resolution A.584(14) entitled “Measures to prevent unlawful acts which threaten the safety of ships and the security of their passengers and crew”, MSC/Circ.443 on “Measures to prevent unlaw-

ful acts against passengers and crew on board ships” and MSC/Circ.754 on “Passenger ferry security. among the IMO instruments relevant to the scope of resolution A.924(22),

Recalling resolution 5 entitled “Future amendments to chapter XI of the 1974 SOLAS Convention on special measures to enhance maritime safety”, adopted by the 1994 Conference of Contracting Government to the International Convention for the Safety of Life at Sea, 1974,

Having considered amendments to the Annex of the Convention proposed and circulated to all Members of the Organization and to all Contracting Governments to the Convention,

1. Adopts, in accordance with article VIII(c)(ii) of the Convention, amendments to the Annex of the Convention, the text of which is given in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the aforementioned amendments shall be deemed to have been accepted on 1 January 2004, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;

3. Invites Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the said amendments shall enter into force on 1 July 2004 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General of the Organization, in conformity with article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to all Members of the Organization, which are not Contracting Governments to the Convention.

Annex

Amendments to the annex to the international convention for The safety of life at sea, 1974 as amended

CHAPTER V

SAFETY OF NAVIGATION

Regulation 19

Carriage requirements for shipborne navigational systems and equipment

1 The existing subparagraphs .4, .5 and .6 of paragraph 2.4.2 are replaced by the following:

“4 in the case of ships, other than passenger ships and tankers, of 300 gross tonnage and upwards but less than 50,000 gross tonnage, not later than the first safety equipment survey¹⁾ after 1 July 2004 or by 31 December 2004, whichever occurs earlier; and.

2 The following new sentence is added at the end of the existing subparagraph .7 of paragraph 2.4:

“Ships fitted with AIS shall maintain AIS in operation at all times except where international agreements, rules or standards provide for the protection of navigational information”.

CHAPTER XI

SPECIAL MEASURES TO ENHANCE MARITIME SAFETY

3 The existing chapter XI is renumbered as chapter XI-1.

Regulation 3

Ship identification number

4 The following text is inserted after the title of the regulation:

“(Paragraphs 4 and 5 apply to all ships to which this regulation applies. For ships constructed before 1 July 2004, the requirements of paragraphs 4 and 5 shall be complied with not later than the first scheduled dry-docking of the ship after 1 July 2004)”

5 The existing paragraph 4 is deleted and the following new text is inserted:

- “4 The ship’s identification number shall be permanently marked:
- .1 in a visible place either on the stern of the ship or on either side of the hull, amidships port and starboard, above the deepest assigned load line or either side of the superstructure, port and starboard or on the front of the superstructure or, in the case of passenger ships, on a horizontal surface visible from the air; and
 - .2 in an easily accessible place either on one of the end transverse bulkheads of the machinery spaces, as defined in regulation II-2/3.30, or on one of the hatchways or, in the case of tankers, in the pump-room or, in the case of ships with ro-ro spaces, as defined in regulation II-2/3.41, on one of the end transverse bulkheads of the ro-ro spaces.

¹⁾ The first safety equipment survey means the first annual survey the first periodical survey or the first renewal survey for safety equipment, whichever is due first after 1 July 2004 and, in addition, in the case of ships under construction, the initial survey.

5.1 The permanent marking shall be plainly visible, clear of any other markings on the hull and shall be painted in a contrasting colour.

5.2 The permanent marking referred to in paragraph 4.1 shall be not less than 200 mm in height. The permanent marking referred to in paragraph 4.2 shall not be less than 100 mm in height. The width of the marks shall be proportionate to the height.

5.3 The permanent marking may be made by raised lettering or by cutting it in or by centre punching it or by any other equivalent method of marking the ship identification number which ensures that the marking is not easily expunged.

5.4 On ships constructed of material other than steel or metal, the Administration shall approve the method of marking the ship identification number.

6 The following new regulation 5 is added after the existing regulation 4:

“Regulation 5

Continuous Synopsis Record

1 Every ship to which chapter I applies shall be issued with a Continuous Synopsis Record.

2.1 The Continuous Synopsis Record is intended to provide an on-board record of the history of the ship with respect to the information recorded therein.

2.2 For ships constructed before 1 July 2004, the Continuous Synopsis Record shall, at least, provide the history of the ship as from 1 July 2004.

3 The Continuous Synopsis Record shall be issued by the Administration to each ship that is entitled to fly its flag and it shall contain, at least, the following information:

- .1 the name of the State whose flag the ship is entitled to fly;
- .2 the date on which the ship was registered with that State;
- .3 the ship's identification number in accordance with regulation 3;
- .4 the name of the ship;
- .5 the port at which the ship is registered;
- .6 the name of the registered owner(s) and their registered address(es);
- .7 the name of the registered bareboat charterer(s) and their registered address(es), if applicable;
- .8 the name of the Company, as defined in regulation IX/1, its registered address and the address(es) from where it carries out the safety management activities;
- .9 the name of all classification society(ies) with which the ship is classed;

- .10 the name of the Administration or of the Contracting Government or of the recognized organization which has issued the Document of Compliance (or the Interim Document of Compliance), specified in the ISM Code as defined in regulation IX/1, to the Company operating the ship and the name of the body which has carried out the audit on the basis of which the document was issued, if other than that issuing the document;
- .11 the name of the Administration or of the Contracting Government or of the recognized organization that has issued the Safety Management Certificate (or the Interim Safety Management Certificate), specified in the ISM Code as defined in regulation IX/1, to the ship and the name of the body which has carried out the audit on the basis of which the certificate was issued, if other than that issuing the certificate;
- .12 the name of the Administration or of the Contracting Government or of the recognized security organization that has issued the International Ship Security Certificate (or an Interim International Ship Security Certificate), specified in part A of the ISPS Code as defined in regulation XI-2/1, to the ship and the name of the body which has carried out the verification on the basis of which the certificate was issued, if other than that issuing the certificate; and
- .13 the date on which the ship ceased to be registered with that State.

4.1 Any changes relating to the entries referred to in paragraphs 3.4 to 3.12 shall be recorded in the Continuous Synopsis Record so as to provide updated and current information together with the history of the changes.

4.2 In case of any changes relating to the entries referred to in paragraph 4.1, the Administration shall issue, as soon as is practically possible but not later than three months from the date of the change, to the ships entitled to fly its flag either a revised and updated version of the Continuous Synopsis Record or appropriate amendments thereto.

4.3 In case of any changes relating to the entries referred to in paragraph 4.1, the Administration, pending the issue of a revised and updated version of the Continuous Synopsis Record, shall authorise and require either the Company as defined in regulation IX/1 or the master of the ship to amend the Continuous Synopsis Record to reflect the changes. In such cases, after the Continuous Synopsis Record has been amended the Company shall, without delay, inform the Administration accordingly.

5.1 The Continuous Synopsis Record shall be in English, French or Spanish language. Additionally, a translation of the Continuous Synopsis Record into the official language or languages of the Administration may be provided.

5.2 The Continuous Synopsis Record shall be in the format developed by the Organization and shall be maintained in accordance with guidelines developed by the Organization. Any previous entries in the

Continuous Synopsis Record shall not be modified, deleted or, in any way, erased or defaced.

6 Whenever a ship is transferred to the flag of another State or the ship is sold to another owner (or is taken over by another bareboat charterer) or another Company assumes the responsibility for the operation of the ship, the Continuous Synopsis Record shall be left on board.

7 When a ship is to be transferred to the flag of another State, the Company shall notify the Administration of the name of the State under whose flag the ship is to be transferred so as to enable the Administration to forward to that State a copy of the Continuous Synopsis Record covering the period during which the ship was under their jurisdiction.

8 When a ship is transferred to the flag of another State the Government of which is a Contracting Government, the Contracting Government of the State whose flag the ship was flying hitherto shall transmit to the Administration as soon as possible after the transfer takes place a copy of the relevant Continuous Synopsis Record covering the period during which the ship was under their jurisdiction together with any Continuous Synopsis Records previously issued to the ship by other States.

9 When a ship is transferred to the flag of another State, the Administration shall append the previous Continuous Synopsis Records to the Continuous Synopsis Record the Administration will issue to the ship so to provide the continuous history record intended by this regulation.

10 The Continuous Synopsis Record shall be kept on board the ship and shall be available for inspection at all times.”

7 The following new chapter XI-2 is inserted after the renumbered chapter XI-1:

“CHAPTER XI-2

SPECIAL MEASURES TO ENHANCE MARITIME SECURITY

Regulation 1

Definitions

- 1 For the purpose of this chapter, unless expressly provided otherwise:
- .1 Bulk carrier means a bulk carrier as defined in regulation IX/1.6.
 - .2 Chemical tanker means a chemical tanker as defined in regulation VII/8.2.
 - .3 Gas carrier means a gas carrier as defined in regulation VII/11.2.

- .4 High-speed craft means a craft as defined in regulation X/1.2.
- .5 Mobile offshore drilling unit means a mechanically propelled mobile offshore drilling unit, as defined in regulation IX/1, not on location.
- .6 Oil tanker means an oil tanker as defined in regulation II-1/2.12.
- .7 Company means a Company as defined in regulation IX/1.
- .8 Ship/port interface means the interactions that occur when a ship is directly and immediately affected by actions involving the movement of persons, goods or the provisions of port services to or from the ship.
- .9 Port facility is a location, as determined by the Contracting Government or by the Designated Authority, where the ship/port interface takes place. This includes areas such as anchorages, waiting berths and approaches from seaward, as appropriate.
- .10 Ship-to-ship activity means any activity not related to a port facility that involves the transfer of goods or persons from one ship to another.
- .11 Designated Authority means the organization(s) or the administration(s) identified, within the Contracting Government, as responsible for ensuring the implementation of the provisions of this chapter pertaining to port facility security and ship/port interface, from the point of view of the port facility.
- .12 International Ship and Port Facility Security (ISPS) Code means the International Code for the Security of Ships and of Port Facilities consisting of Part A (the provisions of which shall be treated as mandatory) and part B (the provisions of which shall be treated as recommendatory), as adopted, on 12 December 2002, by resolution 2 of the Conference of Contracting Governments to the International Convention for the Safety of Life at Sea, 1974 as may be amended by the Organization, provided that:
 - .1 amendments to part A of the Code are adopted, brought into force and take effect in accordance with article VIII of the present Convention concerning the amendment procedures applicable to the Annex other than chapter I; and
 - .2 amendments to part B of the Code are adopted by the Maritime Safety Committee in accordance with its Rules of Procedure.
- .13 Security incident means any suspicious act or circumstance threatening the security of a ship, including a mobile offshore drilling unit and a high speed craft, or of a port facility or of any ship/port interface or any ship-to-ship activity.
- .14 Security level means the qualification of the degree of risk that a security incident will be attempted or will occur.
- .15 Declaration of security means an agreement reached between a ship and either a port facility or another ship with which it

interfaces specifying the security measures each will implement.

- .16 Recognized security organization means an organization with appropriate expertise in security matters and with appropriate knowledge of ship and port operations authorized to carry out an assessment, or a verification, or an approval or a certification activity, required by this chapter or by part A of the ISPS Code.

2 The term “ship”, when used in regulations 3 to 13, includes mobile offshore drilling units and high-speed craft.

3 The term “all ships”, when used in this chapter, means any ship to which this chapter applies.

4 The term “Contracting Government”, when used in regulations 3, 4, 7, 10, 11, 12 and 13 includes a reference to the “Designated Authority”.

Regulation 2

Application

1 This chapter applies to:

- .1 the following types of ships engaged on international voyages:
 - .1.1 passenger ships, including high-speed passenger craft;
 - .1.2 cargo ships, including high-speed craft, of 500 gross tonnage and upwards; and
 - .1.3 mobile offshore drilling units; and
- .2 port facilities serving such ships engaged on international voyages.

2 Notwithstanding the provisions of paragraph 1.2, Contracting Governments shall decide the extent of application of this chapter and of the relevant sections of part A of the ISPS Code to those port facilities within their territory which, although used primarily by ships not engaged on international voyages, are required, occasionally, to serve ships arriving or departing on an international voyage.

2.1 Contracting Governments shall base their decisions, under paragraph 2, on a port facility security assessment carried out in accordance with the provisions of part A of the ISPS Code.

2.2 Any decision which a Contracting Government makes, under paragraph 2, shall not compromise the level of security intended to be achieved by this chapter or by part A of the ISPS Code.

3 This chapter does not apply to warships, naval auxiliaries or other ships owned or operated by a Contracting Government and used only on Government non-commercial service.

4 Nothing in this chapter shall prejudice the rights or obligations of States under international law.

Regulation 3

Obligations of Contracting Governments with respect to security

1 Administrations shall set security levels and ensure the provision of security level information to ships entitled to fly their flag. When changes in security level occur, security level information shall be updated as the circumstance dictates.

2 Contracting Governments shall set security levels and ensure the provision of security level information to port facilities within their territory, and to ships prior to entering a port or whilst in a port within their territory. When changes in security level occur, security level information shall be updated as the circumstance dictates.

Regulation 4

Requirements for Companies and ships

1 Companies shall comply with the relevant requirements of this chapter and of part A of the ISPS Code taking into account the guidance given in part B of the ISPS Code.

2 Ships shall comply with the relevant requirements of this chapter and of part A of the ISPS Code, taking into account the guidance given in part B of the ISPS Code, and such compliance shall be verified and certified as provided for in part A of the ISPS Code.

3 Prior to entering a port or whilst in a port within the territory of a Contracting Government, a ship shall comply with the requirements for the security level set by that Contracting Government, if such security level is higher than the security level set by the Administration for that ship.

4 Ships shall respond without undue delay to any change to a higher security level.

5 Where a ship is not in compliance with the requirements of this chapter or of part A of the ISPS Code, or cannot comply with the requirements of the security level set by the Administration or by another Contracting Government and applicable to that ship, then the ship shall notify the appropriate competent authority prior to conducting any ship/port interface or prior to entry into port, whichever occurs earlier.

Regulation 5

Specific responsibility of Companies

The Company shall ensure that the master has available on board, at all times, information through which officers duly authorised by a Contracting Government can establish:

- .1 who is responsible for appointing the members of the crew or other persons currently employed or engaged on board the ship in any capacity on the business of that ship;
- .2 who is responsible for deciding the employment of the ship; and
- .3 in cases where the ship is employed under the terms of charter party(ies), who are the parties to such charter party(ies).

Regulation 6

Ship security alert system

- 1 All ships shall be provided with a ship security alert system, as follows:
 - .1 ships constructed on or after 1 July 2004;
 - .2 passenger ships, including high-speed passenger craft, constructed before 1 July 2004, not later than the first survey of the radio installation after 1 July 2004;
 - .3 oil tankers, chemical tankers, gas carriers, bulk carriers and cargo high speed craft, of 500 gross tonnage and upwards constructed before 1 July 2004, not later than the first survey of the radio installation after 1 July 2004; and
 - .4 other cargo ships of 500 gross tonnage and upward and mobile offshore drilling units constructed before 1 July 2004, not later than the first survey of the radio installation after 1 July 2006.
- 2 The ship security alert system, when activated, shall:
 - .1 initiate and transmit a ship-to-shore security alert to a competent authority designated by the Administration, which in these circumstances may include the Company, identifying the ship, its location and indicating that the security of the ship is under threat or it has been compromised;
 - .2 not send the ship security alert to any other ships;
 - .3 not raise any alarm on-board the ship; and
 - .4 continue the ship security alert until deactivated and/or reset.
- 3 The ship security alert system shall:
 - .1 be capable of being activated from the navigation bridge and in at least one other location; and
 - .2 conform to performance standards not inferior to those adopted by the Organization.
- 4 The ship security alert system activation points shall be designed so as to prevent the inadvertent initiation of the ship security alert.
- 5 The requirement for a ship security alert system may be complied with by using the radio installation fitted for compliance with the requirements of chapter IV, provided all requirements of this regulation are complied with.

6 When an Administration receives notification of a ship security alert, that Administration shall immediately notify the State(s) in the vicinity of which the ship is presently operating.

7 When a Contracting Government receives notification of a ship security alert from a ship which is not entitled to fly its flag, that Contracting Government shall immediately notify the relevant Administration and, if appropriate, the State(s) in the vicinity of which the ship is presently operating.

Regulation 7

Threats to ships

1 Contracting Governments shall set security levels and ensure the provision of security-level information to ships operating in their territorial sea or having communicated an intention to enter their territorial sea.

2 Contracting Governments shall provide a point of contact through which such ships can request advice or assistance and to which such ships can report any security concerns about other ships, movements or communications.

3 Where a risk of attack has been identified, the Contracting Government concerned shall advise the ships concerned and their Administrations of:

- .1 the current security level;
- .2 any security measures that should be put in place by the ships concerned to protect themselves from attack, in accordance with the provisions of part A of the ISPS Code; and
- .3 security measures that the coastal State has decided to put in place, as appropriate.

Regulation 8

Master's discretion for ship safety and security

1 The master shall not be constrained by the Company, the charterer or any other person from taking or executing any decision which, in the professional judgement of the master, is necessary to maintain the safety and security of the ship. This includes denial of access to persons (except those identified as duly authorized by a Contracting Government) or their effects and refusal to load cargo, including containers or other closed cargo transport units.

2 If, in the professional judgement of the master, a conflict between any safety and security requirements applicable to the ship arises during its operations, the master shall give effect to those requirements neces-

sary to maintain the safety of the ship. In such cases, the master may implement temporary security measures and shall forthwith inform the Administration and, if appropriate, the Contracting Government in whose port the ship is operating or intends to enter. Any such temporary security measures under this regulation shall, to the highest possible degree, be commensurate with the prevailing security level. When such cases are identified, the Administration shall ensure that such conflicts are resolved and that the possibility of recurrence is minimised.

Regulation 9

Control and compliance measures

1 Control of ships in port

1.1 For the purpose of this chapter, every ship to which this chapter applies is subject to control when in a port of another Contracting Government by officers duly authorised by that Government, who may be the same as those carrying out the functions of regulation I/19. Such control shall be limited to verifying that there is onboard a valid International Ship Security Certificate or a valid Interim International Ships Security Certificate issued under the provisions of part A of the ISPS Code (Certificate), which if valid shall be accepted, unless there are clear grounds for believing that the ship is not in compliance with the requirements of this chapter or part A of the ISPS Code.

1.2 When there are such clear grounds, or where no valid Certificate is produced when required, the officers duly authorized by the Contracting Government shall impose any one or more control measures in relation to that ship as provided in paragraph 1.3. Any such measures imposed must be proportionate, taking into account the guidance given in part B of the ISPS Code.

1.3 Such control measures are as follows: inspection of the ship, delaying the ship, detention of the ship, restriction of operations including movement within the port, or expulsion of the ship from port. Such control measures may additionally or alternatively include other lesser administrative or corrective measures.

2 Ships intending to enter a port of another Contracting Government

2.1 For the purpose of this chapter, a Contracting Government may require that ships intending to enter its ports provide the following information to officers duly authorized by that Government to ensure compliance with this chapter prior to entry into port with the aim of avoiding the need to impose control measures or steps:

- .1 that the ship possesses a valid Certificate and the name of its issuing authority;
- .2 the security level at which the ship is currently operating;
- .3 the security level at which the ship operated in any previous port where it has conducted a ship/port interface within the timeframe specified in paragraph 2.3;

- .4 any special or additional security measures that were taken by the ship in any previous port where it has conducted a ship/port interface within the timeframe specified in paragraph 2.3;
- .5 that the appropriate ship security procedures were maintained during any ship to ship activity within the timeframe specified in paragraph 2.3; or
- .6 other practical security-related information (but not details of the ship security plan), taking into account the guidance given in part B of the ISPS Code.

If requested by the Contracting Government, the ship or the Company shall provide confirmation, acceptable to that Contracting Government, of the information required above.

2.2 Every ship to which this chapter applies intending to enter the port of another Contracting Government shall provide the information described in paragraph 2.1 on the request of the officers duly authorized by that Government. The master may decline to provide such information on the understanding that failure to do so may result in denial of entry into port.

2.3 The ship shall keep records of the information referred to in paragraph 2.1 for the last 10 calls at port facilities.

2.4 If, after receipt of the information described in paragraph 2.1, officers duly authorised by the Contracting Government of the port in which the ship intends to enter have clear grounds for believing that the ship is in non-compliance with the requirements of this chapter or part A of the ISPS Code, such officers shall attempt to establish communication with and between the ship and the Administration in order to rectify the non-compliance. If such communication does not result in rectification, or if such officers have clear grounds otherwise for believing that the ship is in non-compliance with the requirements of this chapter or part A of the ISPS Code, such officers may take steps in relation to that ship as provided in paragraph 2.5. Any such steps taken must be proportionate, taking into account the guidance given in part B of the ISPS Code.

2.5 Such steps are as follows:

- .1 a requirement for the rectification of the non-compliance;
- .2 a requirement that the ship proceed to a location specified in the territorial sea or internal waters of that Contracting Government;
- .3 inspection of the ship, if the ship is in the territorial sea of the Contracting Government the port of which the ship intends to enter; or
- .4 denial of entry into port.

Prior to initiating any such steps, the ship shall be informed by the Contracting Government of its intentions. Upon this information

the master may withdraw the intention to enter that port. In such cases, this regulation shall not apply.

3 Additional provisions

3.1 In the event:

- .1 of the imposition of a control measure, other than a lesser administrative or corrective measure, referred to in paragraph 1.3; or
- .2 any of the steps referred to in paragraph 2.5 are taken, an officer duly authorized by the Contracting Government shall forthwith inform in writing the Administration specifying which control measures have been imposed or steps taken and the reasons thereof. The Contracting Government imposing the control measures or steps shall also notify the recognized security organization, which issued the Certificate relating to the ship concerned and the Organization when any such control measures have been imposed or steps taken.

3.2 When entry into port is denied or the ship is expelled from port, the authorities of the port State should communicate the appropriate facts to the authorities of the State of the next appropriate ports of call, when known, and any other appropriate coastal States, taking into account guidelines to be developed by the Organization. Confidentiality and security of such notification shall be ensured.

3.3 Denial of entry into port, pursuant to paragraphs 2.4 and 2.5, or expulsion from port, pursuant to paragraphs 1.1 to 1.3, shall only be imposed where the officers duly authorized by the Contracting Government have clear grounds to believe that the ship poses an immediate threat to the security or safety of persons, or of ships or other property and there are no other appropriate means for removing that threat.

3.4 The control measures referred to in paragraph 1.3 and the steps referred to in paragraph 2.5 shall only be imposed, pursuant to this regulation, until the non-compliance giving rise to the control measures or steps has been corrected to the satisfaction of the Contracting Government, taking into account actions proposed by the ship or the Administration, if any.

3.5 When Contracting Governments exercise control under paragraph 1 or take steps under paragraph 2:

- .1 all possible efforts shall be made to avoid a ship being unduly detained or delayed. If a ship is thereby unduly detained, or delayed, it shall be entitled to compensation for any loss or damage suffered; and
- .2 necessary access to the ship shall not be prevented for emergency or humanitarian reasons and for security purposes.

Regulation 10

Requirements for port facilities

1 Port facilities shall comply with the relevant requirements of this chapter and part A of the ISPS Code, taking into account the guidance given in part B of the ISPS Code.

2 Contracting Governments with a port facility or port facilities within their territory, to which this regulation applies, shall ensure that:

- .1 port facility security assessments are carried out, reviewed and approved in accordance with the provisions of part A of the ISPS Code; and
- .2 port facility security plans are developed, reviewed, approved and implemented in accordance with the provisions of part A of the ISPS Code.

3 Contracting Governments shall designate and communicate the measures required to be addressed in a port facility security plan for the various security levels, including when the submission of a Declaration of Security will be required.

Regulation 11

Alternative security agreements

1 Contracting Governments may, when implementing this chapter and part A of the ISPS Code, conclude in writing bilateral or multilateral agreements with other Contracting Governments on alternative security arrangements covering short international voyages on fixed routes between port facilities located within their territories.

2 Any such agreement shall not compromise the level of security of other ships or of port facilities not covered by the agreement.

3 No ship covered by such an agreement shall conduct any ship-to-ship activities with any ship not covered by the agreement.

4 Such agreements shall be reviewed periodically, taking into account the experience gained as well as any changes in the particular circumstances or the assessed threats to the security of the ships, the port facilities or the routes covered by the agreement.

Regulation 12

Equivalent security arrangements

1 An Administration may allow a particular ship or a group of ships entitled to fly its flag to implement other security measures equivalent to those prescribed in this chapter or in part A of the ISPS Code,

provided such security measures are at least as effective as those prescribed in this chapter or part A of the ISPS Code. The Administration, which allows such security measures, shall communicate to the Organization particulars thereof.

2 When implementing this chapter and part A of the ISPS Code, a Contracting Government may allow a particular port facility or a group of port facilities located within its territory, other than those covered by an agreement concluded under regulation 11, to implement security measures equivalent to those prescribed in this chapter or in Part A of the ISPS Code, provided such security measures are at least as effective as those prescribed in this chapter or part A of the ISPS Code. The Contracting Government, which allows such security measures, shall communicate to the Organization particulars thereof.

Regulation 13

Communication of information

1 Contracting Governments shall, not later than 1 July 2004, communicate to the Organization and shall make available for the information of Companies and ships:

- .1 the names and contact details of their national authority or authorities responsible for ship and port facility security;
- .2 the locations within their territory covered by the approved port facility security plans.
- .3 the names and contact details of those who have been designated to be available at all times to receive and act upon the ship-to-shore security alerts, referred to in regulation 6.2.1;
- .4 the names and contact details of those who have been designated to be available at all times to receive and act upon any communications from Contracting Governments exercising control and compliance measures, referred to in regulation 9.3.1; and
- .5 the names and contact details of those who have been designated to be available at all times to provide advice or assistance to ships and to whom ships can report any security concerns, referred to in regulation 7.2; and thereafter update such information as and when changes relating thereto occur. The Organization shall circulate such particulars to other Contracting Governments for the information of their officers.

2 Contracting Governments shall, not later than 1 July 2004, communicate to the Organization the names and contact details of any recognized security organizations authorized to act on their behalf together with details of the specific responsibility and conditions of authority del-

egated to such organizations. Such information shall be updated as and when changes relating thereto occur. The Organization shall circulate such particulars to other Contracting Governments for the information of their officers.

3 Contracting Governments shall, not later than 1 July 2004, communicate to the Organization a list showing the approved port facility security plans for the port facilities located within their territory together with the location or locations covered by each approved port facility security plan and the corresponding date of approval and thereafter shall further communicate when any of the following changes take place:

- .1 changes in the location or locations covered by an approved port facility security plan are to be introduced or have been introduced. In such cases the information to be communicated shall indicate the changes in the location or locations covered by the plan and the date as of which such changes are to be introduced or were implemented;
- .2 an approved port facility security plan, previously included in the list submitted to the Organization, is to be withdrawn or has been withdrawn. In such cases, the information to be communicated shall indicate the date on which the withdrawal will take effect or was implemented. In these cases, the communication shall be made to the Organization as soon as is practically possible; and
- .3 additions are to be made to the list of approved port facility security plans. In such cases, the information to be communicated shall indicate the location or locations covered by the plan and the date of approval.

4 Contracting Governments shall, at five year intervals after 1 July 2004, communicate to the Organization a revised and updated list showing all the approved port facility security plans for the port facilities located within their territory together with the location or locations covered by each approved port facility security plan and the corresponding date of approval (and the date of approval of any amendments thereto) which will supersede and replace all information communicated to the Organization, pursuant to paragraph 3, during the preceding five years.

5 Contracting Governments shall communicate to the Organization information that an agreement under regulation 11 has been concluded. The information communicated shall include:

- .1 the names of the Contracting Governments which have concluded the agreement;
- .2 the port facilities and the fixed routes covered by the agreement;
- .3 the periodicity of review of the agreement;
- .4 the date of entry into force of the agreement; and
- .5 information on any consultations which have taken place with other Contracting Governments;

and thereafter shall communicate, as soon as practically possible, to the Organization information when the agreement has been amended or has ended.

6 Any Contracting Government which allows, under the provisions of regulation 12, any equivalent security arrangements with respect to a ship entitled to fly its flag or with respect to a port facility located within its territory, shall communicate to the Organization particulars thereof.

7 The Organization shall make available the information communicated under paragraph 3 to 6 to other Contracting Governments upon request.

De vertaling in het Nederlands van Resolutie 1 van 12 december 2002 luidt als volgt:

Resolutie 1 van de Conferentie van Verdragsluitende Regeringen bij het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, aangenomen op 12 december 2002

Aanneming van wijzigingen van de Bijlage bij het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974

De Conferentie,

Indachtig de doelstellingen en beginselen van het Handvest van de Verenigde Naties betreffende de handhaving van de internationale vrede en veiligheid en de bevordering van vriendschappelijke betrekkingen en samenwerking tussen de staten,

Uiterst bezorgd over de toeneming over de gehele wereld van daden van terrorisme in al zijn vormen, die het leven van onschuldigen in gevaar brengen of waarbij onschuldigen om het leven komen, de fundamentele vrijheden schaden en de menselijke waardigheid in ernstige mate aantasten,

Doordrongen van het belang en de relevantie van de scheepvaart voor de wereldhandel en -economie, en daarom vastbesloten de wereldwijde lever-/aanvoerketen te beschermen tegen verstoringen ten gevolge van terroristische aanvallen op schepen, havens, laad- en losplaatsen buitengaats of andere voorzieningen,

Overwegend dat wederrechtelijke gedragingen tegen de scheepvaart de veiligheid en beveiliging van mensen en goederen in gevaar brengen, de exploitatie van maritieme diensten ernstig aantasten en het vertrouwen van de wereldbevolking in de veiligheid van de zeescheepvaart ondermijnen,

Overwegend dat dergelijke gedragingen de gehele internationale gemeenschap ernstig verontrusten, waarbij voorts het belang van doelmatig en economisch vervoer voor de wereldhandel wordt onderkend,

Overtuigd van de dringende noodzaak internationale samenwerking tussen de staten te bewerkstelligen door het opstellen en aannemen van doeltreffende en praktische maatregelen die de reeds door de Internationale Maritieme Organisatie (hierna te noemen „de Organisatie”) getroffen maatregelen aanvullen teneinde wederrechtelijke gedragingen tegen de scheepvaart in de ruime zin van het woord te voorkomen en te bestrijden,

In herinnering roepend VN-resolutie 1373 (2001) van de Veiligheidsraad, aangenomen op 28 september 2001, waarbij de staten worden opgeroepen maatregelen te treffen teneinde terroristische handelingen te voorkomen en te bestrijden, met inbegrip van de oproep aan staten de verdragen tot bestrijding van terrorisme volledig uit te voeren,

Gelet op de gezamenlijke maatregelen inzake de veiligheid van vervoer (in het bijzonder het deel inzake maritieme veiligheid) van de G8, die de G8-leiders tijdens de top in Kananaskis, Alberta (Canada) in juni 2002 hebben bekrachtigd,

In herinnering roepend artikel VIII(c), van het Internationaal verdrag voor de beveiliging van mensenlevens op zee, 1974 (hierna te noemen „het Verdrag”)inzake de procedure voor wijziging van het Verdrag door een conferentie van Verdragsluitende Regeringen,

Gelet op resolutie A.924(22) getiteld „Herziening van maatregelen en procedures ter voorkoming van terroristische gedragingen die de beveiliging van passagiers en bemanning en de veiligheid van schepen in gevaar brengen”, op 20 november 2001 aangenomen door de Vergadering van de Organisatie, waarin onder andere

a. de noodzaak van herziening door de Organisatie onderkend wordt, met het oog op herziening van de bestaande internationale juridische en technische maatregelen en geschikte nieuwe maatregelen te overwegen teneinde terrorisme tegen schepen te voorkomen en te bestrijden en teneinde de beveiliging aan boord en aan wal te verbeteren teneinde de gevaren voor passagiers, bemanning en personeel aan boord van schepen en in havengebieden en de vaartuigen en hun vracht te verminderen; en

b. de Maritieme Veiligheidscommissie van de Organisatie, de Juridische Commissie en de Facilitaire Commissie wordt verzocht onder leiding van de Raad met grote prioriteit tot herziening over te gaan teneinde vast te stellen of het noodzakelijk is de in de preambule van de voornoemde resolutie bedoelde instrumenten en andere relevante IMO-instrumenten die tot hun werkterrein behoren te actualiseren en/of andere beveiligingsmaatregelen te treffen en in het kader van deze herziening zo nodig maatregelen te treffen;

Resolutie A.584(14), getiteld „Maatregelen ter voorkoming van wederrechtelijke handelingen die de veiligheid van schepen en de beveiliging van passagiers en bemanning in gevaar brengen”, MSC/circ. 443 inzake „Maatregelen ter voorkoming van wederrechtelijke handelingen tegen passagiers en bemanningen aan boord van schepen” en MSC/circ. 754 inzake „Beveiliging van passagiersveerboten” aangemerkt hebbend als relevante IMO-instrumenten voor de reikwijdte van resolutie A.924 (22),

In herinnering roepend resolutie 5 getiteld „Toekomstige wijzigingen van hoofdstuk XI van het SOLAS-verdrag van 1974 betreffende speciale maatregelen ter bevordering van de veiligheid op zee”, aangenomen door de Conferentie van 1994 van Verdragsluitende Regeringen bij het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974,

Gelet op de voorgestelde wijzigingen van de Bijlage bij het Verdrag die onder alle leden van de Organisatie en alle Verdragsluitende Regeringen bij het Verdrag zijn verspreid,

1. Neemt, overeenkomstig artikel VIII(c)(ii) van het Verdrag, de wijzigingen van de Bijlage bij het Verdrag aan, waarvan de tekst is vervat in de Bijlage bij deze resolutie,

2. Bepaalt, in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag, dat voornoemde wijzigingen worden geacht te zijn aanvaard op 1 januari 2004, tenzij vóór die datum meer dan een derde van de Verdragsluitende Regeringen die Partij zijn bij het Verdrag, of de Verdragsluitende Regeringen waarvan de gezamenlijke koopvaardijvloeden ten minste vijftig procent van de brutotonnage van de wereldkoopvaardijvloot vormen, hun bezwaren tegen de wijzigingen kenbaar hebben gemaakt,

3. Nodigt de Verdragsluitende Regeringen bij het Verdrag uit er nota van te nemen dat, in overeenstemming met artikel VIII(b)(vii)(2), van het Verdrag, voornoemde wijzigingen na hun aanvaarding in overeenstemming met paragraaf 2 hierboven, in werking treden op 1 juli 2004,

4. Verzoekt de Secretaris-Generaal van de Organisatie, in overeenstemming met artikel VIII(b)(v) van het Verdrag, voor eensluidend gewaarmerkte afschriften van deze resolutie en van de tekst van de in de Bijlage vervatte wijzigingen te doen toekomen aan alle Verdragsluitende Regeringen die Partij zijn bij het Verdrag,

5. Verzoekt de Secretaris-Generaal voorts afschriften van deze resolutie en de Bijlage daarbij te doen toekomen aan alle Leden van de Organisatie waarvan de Regeringen geen Partij zijn bij het Verdrag.

Bijlage**Wijzigingen van de Bijlage bij het Internationaal Verdrag voor de
beveiliging van mensenlevens op zee, 1974, zoals gewijzigd**

HOOFDSTUK V

VEILIGHEID VAN DE NAVIGATIE

Voorschrift 19

*Uitrustingsvereisten voor navigatiesystemen en -uitrusting aan
boord van schepen*

1. De huidige subparagrafen 4, 5 en 6 van paragraaf 2.4.2 worden vervangen door de volgende:
 „4 in het geval van schepen niet zijnde passagiersschepen en tankschepen met een bruto-tonnage van 300 of meer maar minder dan 50.000, uiterlijk op de datum van het eerste onderzoek van de veiligheidsuitrusting¹⁾ na 1 juli 2004 of voor 31 december 2004, naar gelang van wat zich het eerste voordoet; en”
2. De volgende nieuwe zin wordt toegevoegd aan het eind van de huidige subparagraaf 7 van paragraaf 2.4:
 ” Op schepen uitgerust met AIS blijft AIS te allen tijde in werking, tenzij internationale overeenkomsten, regels of normen voorzien in de bescherming van navigatiegegevens.”

HOOFDSTUK XI

SPECIALE MAATREGELEN TER VERBETERING VAN DE
VEILIGHEID OP ZEE

3. Het huidige hoofdstuk XI wordt hernummerd tot hoofdstuk XI-1.

Voorschrift 3

Scheepsidentificatienummer

4. De volgende tekst wordt ingevoegd na de titel van het voorschrift:
 „(De paragrafen 4 en 5 zijn van toepassing op alle schepen waarop dit voorschrift van toepassing is. Schepen gebouwd voor 1 juli

¹⁾ Met het eerste onderzoek van de veiligheidsuitrusting wordt bedoeld het eerste jaarlijkse onderzoek, het eerste periodieke onderzoek of het eerste hernieuwde onderzoek van de veiligheidsuitrusting, al naar gelang welke na 1 juli 2004 het eerst dient plaats te vinden en voorts, in het geval van schepen in aanbouw, het eerste onderzoek.

2004 dienen uiterlijk bij de eerstvolgende geplande droogzetting van het schip na 1 juli 2004 te voldoen aan de paragrafen 4 en 5.)”

5. De huidige paragraaf 4 wordt geschrapt en de volgende nieuwe tekst wordt ingevoegd:

„4. Het scheepsidentificatienummer dient duurzaam te zijn aangebracht:

- .1 op een zichtbare plaats, hetzij op de achterstevan van het schip of aan beide zijden van de romp, midscheeps aan stuur- en bakboord, boven de diepste vastgestelde lastlijn of aan beide zijden van de bovenbouw, aan stuurboord en bakboord of aan de voorzijde van de bovenbouw of, in het geval van passagiersschepen, op een horizontaal oppervlak dat zichtbaar is vanuit de lucht; en
- .2 op een gemakkelijk toegankelijke plaats, hetzij op een van de eindwarsschotten van de machineruimtes, als omschreven in voorschrift II-2/3.30, of op een van de luiken, of in het geval van tankschepen, in de pompkamer of, in het geval van schepen met ro-ro ruimten, als omschreven in voorschrift II-2/3.41, op een van de eindwarsschotten van de ro-ro ruimten.

5.1 Het duurzaam aangebrachte nummer dient goed zichtbaar te zijn, zich op afstand te bevinden van andere markeringen op de romp en aangebracht te zijn in een contrasterende kleur.

5.2 De cijfers van het in paragraaf 4.1 bedoelde nummer dienen ten minste 200 mm hoog te zijn. De cijfers van het in paragraaf 4.2 bedoelde nummer dienen ten minste 100 mm hoog te zijn. De breedte van de cijfers dient in verhouding te staan tot de hoogte.

5.3 Het duurzaam aangebrachte nummer kan worden aangebracht in de vorm van opliggende cijfers, of met behulp van graveren of centerponsen of met behulp van een andere vergelijkbare methode voor het aanbrengen van het scheepsidentificatienummer die waarborgt dat het nummer niet snel onleesbaar wordt.

5.4 Op schepen vervaardigd van ander materiaal dan staal of metaal, dient de Administratie de methode voor het aanbrengen van het scheepsidentificatienummer goed te keuren.”

6. Het volgende nieuwe voorschrift 5 wordt toegevoegd na het huidige voorschrift 4:

„Voorschrift 5

Continuous Synopsis Record

1. Voor elk schip waarop hoofdstuk I van toepassing is, wordt een Continuous Synopsis Record (CSR) afgegeven.

2.1 Het CSR heeft tot doel om in een aan boord van het schip aanwezig document de historie van het schip met betrekking tot de daarin opgetekende informatie vast te leggen.

2.2 Voor schepen gebouwd voor 1 juli 2004 dient het CSR ten minste de historie van het schip vanaf 1 juli 2004 te bevatten.

3. De Administratie geeft het CSR af voor ieder schip dat gerechtigd is haar vlag te voeren en bevat ten minste de volgende gegevens:

- .1 de naam van de Staat waarvan het schip gerechtigd is de vlag te voeren;
- .2 de datum waarop het schip in die Staat geregistreerd werd;
- .3 het identificatienummer van het schip in overeenstemming met voorschrift 3;
- .4 de naam van het schip;
- .5 de haven waar het schip geregistreerd is;
- .6 de naam van de geregistreeerde eigena(a)r(en) en het adres waarop hij/zij ingeschreven staat(n);
- .7 de naam van de geregistreeerde rompbevrachter(s) en het adres waarop hij/zij ingeschreven staat(n), indien van toepassing;
- .8 de naam van de maatschappij, omschreven in voorschrift IX/1, het adres waarop zij ingeschreven staat en het adres of de adressen van waaruit de werkzaamheden ten behoeve van het veiligheidsmanagement worden verricht;
- .9 de naam van alle classificatiemaatschappijen waarbij het schip geclassificeerd is;
- .10 de naam van de Administratie of van de Verdragsluitende Regering of van de erkende organisatie die het conformiteitsdocument (of het voorlopig conformiteitsdocument), vermeld in de ISM-code zoals omschreven in voorschrift IX/1, aan de maatschappij die het schip exploiteert heeft afgegeven en de naam van het lichaam dat de controle heeft verricht op basis waarvan het document is afgegeven, indien deze niet dezelfde is die het document heeft afgegeven;
- .11 de naam van de Administratie of van de Verdragsluitende Regering of van de erkende organisatie die het veiligheidsmanagementcertificaat (of het voorlopig veiligheidsmanagementcertificaat), vermeld in de ISM-code omschreven in voorschrift IX/1, aan het schip heeft afgegeven en de naam van het lichaam dat de controle heeft verricht op basis waarvan het certificaat is afgegeven, indien deze niet dezelfde is die het certificaat heeft afgegeven;
- .12 de naam van de Administratie of van de Verdragsluitende Regering of van de erkende beveiligingsorganisatie die het internationale scheepsbeveiligingscertificaat (of een voorlopig internationaal scheepsbeveiligingscertificaat) heeft afgegeven, omschreven in deel A van de ISPS-code, zoals omschreven in voorschrift XI-2/1, aan het schip en de naam van het orgaan dat de verificatie heeft verricht op basis waarvan het certificaat is afgegeven, indien dat niet hetzelfde is als het orgaan dat het certificaat heeft afgegeven; en

.13 de datum vanaf wanneer het schip niet langer in die Staat geregistreerd is.

4.1 Eventuele wijzigingen met betrekking tot de vermeldingen bedoeld in de paragrafen 3.4 tot en met 3.12 dienen te worden vastgelegd in het CSR teneinde te voorzien in geactualiseerde informatie in combinatie met een overzicht van de wijzigingen.

4.2 In het geval van wijzigingen met betrekking tot de vermeldingen bedoeld in paragraaf 4.1, verstrekt de Administratie zo spoedig als praktisch haalbaar is, maar uiterlijk drie maanden na de datum van de wijziging aan de schepen die gerechtigd zijn haar vlag te voeren hetzij een herziene en geactualiseerde versie van het CSR hetzij de desbetreffende wijzigingen ervan.

4.3 In het geval van wijzigingen met betrekking tot de vermeldingen bedoeld in paragraaf 4.1, in afwachting van de afgifte van een herziene en geactualiseerde versie van het CSR, geeft de Administratie toestemming voor en verlangt zij van de onderneming omschreven in voorschrift IX/1 of van de kapitein van het schip om het CSR zodanig aan te passen dat de wijzigingen worden weergegeven. In dergelijke gevallen stelt de maatschappij zodra het CSR gewijzigd is de Administratie onverwijld dienovereenkomstig in kennis.

5.1 Het CSR dient in de Engelse, de Franse of de Spaanse taal te zijn. Tevens kan een vertaling van het CSR in de officiële taal of talen van de Administratie worden verstrekt.

5.2 Het CSR dient te worden opgesteld aan de hand van een door de Organisatie opgesteld modelformulier en dient te worden bijgehouden aan de hand van de richtlijnen ontwikkeld door de Organisatie. Eerdere vermeldingen in het CSR mogen niet worden aangepast, geschrapt of op andere wijze worden verwijderd of onleesbaar worden gemaakt.

6. Wanneer een schip de vlag van een andere Staat gaat voeren of verkocht wordt (of wordt overgenomen door een andere rompbevrachter) of wanneer een andere maatschappij de verantwoordelijkheid voor de exploitatie van het schip aanvaardt, dient het CSR aan boord te blijven.

7. Wanneer een schip de vlag van een andere Staat gaat voeren, dient de maatschappij de Administratie in kennis te stellen van de naam van de Staat waaraan het schip wordt overgedragen, teneinde de Administratie in staat te stellen die Staat een afschrift van het deel van het CSR toe te zenden dat betrekking heeft op het tijdvak waarin het schip onder haar rechtsmacht viel.

8. Indien een schip de vlag van een andere Staat gaat voeren, waarvan de Regering een Verdragsluitende Partij is, zendt de Verdragsluitende Regering van de Staat waarvan het schip de vlag tot dusver voerde de Administratie zo spoedig mogelijk na de overdracht een afschrift van het deel van het CSR dat betrekking heeft op het tijdvak waarin het schip onder zijn rechtsmacht viel tezamen met de delen van het CSR die eerder door andere Staten aan het schip zijn afgegeven.

9. Wanneer een schip de vlag van een andere Staat is gaan voeren, voegt de Administratie bij de eerdere delen van het CSR het deel dat de Administratie zal afgeven aan het schip teneinde te bewerkstelligen dat het CSR de volledige historie van het schip omvat zoals met dit voorschrift beoogd.

10. Het CSR dient te allen tijde aan boord van het schip te blijven en beschikbaar te zijn voor inzage.

7. Het volgende nieuwe hoofdstuk XI-2 wordt ingevoegd na het hernummerde hoofdstuk XI-1:

„HOOFDSTUK XI-2

SPECIALE MAATREGELLEN TER VERBETERING VAN DE BEVEILIGING OP ZEE

Voorschrift 1

Definities

1 In dit hoofdstuk wordt, tenzij uitdrukkelijk anders bepaald, verstaan onder:

- .1 Bulkcarrier: een bulkcarrier als omschreven in voorschrift IX/1.6.
- .2 Chemicaliëntankschip: een chemicaliëntankschip als omschreven in voorschrift VII/8.2.
- .3 Gastankschip: een gastankschip zoals omschreven in voorschrift VII/11.2.
- .4 Hogesnelheidsvaartuig: een vaartuig als omschreven in voorschrift X/1.2.
- .5 Booreenheid: een mechanisch voortbewogen booreenheid als omschreven in voorschrift IX/1, zich niet op locatie bevindend.
- .6 Olietankschip: een olietankschip als omschreven in voorschrift II-1/2.12.
- .7 Maatschappij: een maatschappij als omschreven in voorschrift IX/1.
- .8 Ship/haveninterface: de interacties die optreden bij rechtstreekse en onmiddellijke betrokkenheid van een schip bij acties waarvan sprake is van verplaatsing van personen of goederen, dan wel verlening van havendiensten aan of vanuit het schip.
- .9 Havenfaciliteit: een door de Verdragsluitende Regering of de aangewezen autoriteit vastgestelde locatie waar het schip/haven raakvlak plaatsvindt. Deze omvat onder meer ankerplaatsen, ligplaatsen en aanvaarroutes, naar gelang van toepassing.
- .10 Schip-tot-schip-activiteit: iedere niet met een havenfaciliteit verband houdende activiteit die de overdracht van goederen of personen van het ene schip naar het andere omvat.

- .11 Aangewezen autoriteit: de organisatie(s) of de bestuurlijke instantie(s) die binnen de Verdragsluitende Regering verantwoordelijk worden gesteld voor de implementatie van de bepalingen van dit hoofdstuk met betrekking tot de beveiliging van havenfaciliteiten en schip/haveninterfaces, vanuit het oogpunt van de havenfaciliteit.
 - .12 International Ship and Port Facility Security (ISPS) Code: de internationale code voor de beveiliging van schepen en havenfaciliteiten, bestaande uit deel A (waarvan de bepalingen als dwingend worden behandeld) en deel B (waarvan de bepalingen als aanbevelingen worden behandeld), als aangenomen op 12 december 2002 bij resolutie 2 van de Conferentie van Verdragsluitende Regeringen bij het Internationaal Verdrag ter beveiliging van mensenlevens op zee, 1974, als eventueel gewijzigd door de organisatie, op voorwaarde dat:
 - .1 wijzigingen van deel A van de code worden aangenomen, ten uitvoer worden gelegd en in werking treden overeenkomstig artikel VIII van dit Verdrag betreffende de wijzigingsprocedures die voor de Bijlage, met uitzondering van hoofdstuk I, gelden, en
 - .2 wijzigingen van deel B van de code worden aangenomen door de Maritieme Veiligheidscommissie overeenkomstig het reglement van orde.
 - .13 Beveiligingsincident: iedere verdachte handeling of omstandigheid die bedreigend is voor de beveiliging van een schip, met inbegrip van booreenheden en hogesnelheidsvaartuigen, of de beveiliging van een havenfaciliteit, een schip/haven raakvlak of een schip-tot-schip-activiteit.
 - .14 Beveiligingsniveau: gradering van het risico dat een poging tot beveiligingsincident wordt ondernomen of dat een beveiligingsincident plaatsvindt.
 - .15 Beveiligingsverklaring: een overeenkomst tussen een schip en een havenfaciliteit dan wel een ander schip waarmee interactie is, waarin de door partijen te nemen beveiligingsmaatregelen vermeld staan.
 - .16 Erkende beveiligingsorganisatie: een organisatie die over de vereiste deskundigheid op beveiligingsgebied en kennis van schip en havenoperaties beschikt, en die gemachtigd is de door dit hoofdstuk of door deel A van de ISPS-Code voorgeschreven beoordelingen, verificaties, goedkeuringen of certificatie-werkzaamheden te verrichten.
2. In de voorschriften 3 tot en met 13 omvat de term „schip” ook booreenheden en hogesnelheidsvaartuigen.
3. Met de in dit hoofdstuk gebruikte term „alle schepen” worden alle schepen bedoeld waarop dit hoofdstuk van toepassing is.

4. Wanneer in de voorschriften 3, 4, 7, 10, 11, 12 en 13 de term „Verdragsluitende Regering” wordt gebruikt, wordt hiermee ook de „aangewezen autoriteit” bedoeld.

Voorschrift 2

Toepassing

1 Dit hoofdstuk is van toepassing op:

- .1 de volgende soorten schepen die voor internationale reizen worden gebruikt:
 - .1.1 passagiersschepen met inbegrip van hogesnelheidspassagiersvaartuigen;
 - .1.2 vrachtschepen, met inbegrip van hogesnelheidsvaartuigen, met een bruto tonnage van 500 of meer; en
 - .1.3 booreenheden; en
- .2 havenfaciliteiten die dergelijke voor internationale reizen gebruikte schepen afhandelen.

2 Onverminderd de bepalingen van paragraaf 1.2, beslissen de Verdragsluitende Regeringen in hoeverre dit hoofdstuk en de relevante hoofdstukken van deel A van de ISPS-Code van toepassing zijn op die havenfaciliteiten op hun grondgebied die niet hoofdzakelijk voor internationale reizen makende schepen worden gebruikt, maar incidenteel schepen die in verband met een internationale reis aankomen of afvaren moeten afhandelen.

2.1 De Verdragsluitende Regeringen baseren hun besluiten, krachtens paragraaf 2 op beveiligingsbeoordelingen van havenfaciliteiten die worden verricht overeenkomstig het bepaalde in deel A van de ISPS-Code.

2.2 Geen enkel door een Verdragsluitende Regering krachtens paragraaf 2 genomen besluit mag ten koste gaan van het door dit hoofdstuk of door deel A van de ISPS-Code beoogde beveiligingsniveau.

3 Dit hoofdstuk is niet van toepassing op oorlogsschepen, marinehulpschepen of andere schepen die het eigendom zijn of geëxploiteerd worden door een Verdragsluitende Regering en uitsluitend voor niet-commerciële overheidsdiensten worden gebruikt.

4 Niets in dit hoofdstuk mag afbreuk doen aan de uit het internationaal recht voortvloeiende rechten en verplichtingen van staten.

Voorschrift 3

Verplichtingen van de Verdragsluitende Regeringen met betrekking tot de beveiliging

1 Administraties stellen beveiligingsniveaus vast en zorgen dat de schepen die het recht hebben om onder hun vlag te varen over deze beveiligingsniveaus worden geïnformeerd. In geval van wijzigingen van

het beveiligingsniveau wordt de beveiligingsniveau-informatie bijgewerkt zoals de omstandigheden vereisen.

2 De Verdragsluitende Regeringen stellen beveiligingsniveaus vast en zorgen dat de havenfaciliteiten op hun grondgebied en de schepen, voordat zij een haven binnenlopen of terwijl zij zich in een haven op hun grondgebied bevinden, over deze beveiligingsniveaus worden geïnformeerd. In geval van wijzigingen van het beveiligingsniveau wordt de beveiligingsniveau-informatie bijgewerkt naar gelang de omstandigheden dit vereisen.

Voorschrift 4

Eisen voor maatschappijen en schepen

1 De maatschappijen leven de relevante eisen van dit hoofdstuk en van deel A van de ISPS-Code na, waarbij ze rekening houden met de in deel B van de ISPS-Code gegeven richtsnoeren.

2 De schepen leven de relevante eisen van dit hoofdstuk en van deel A van de ISPS-Code na, waarbij ze rekening houden met de in deel B van de ISPS-Code gegeven richtsnoeren. De naleving wordt gecontroleerd en gecertificeerd overeenkomstig de bepalingen van deel A van de ISPS-Code.

3 Alvorens een haven binnen te lopen, of terwijl het zich in een haven op het grondgebied van een Verdragsluitende Regering bevindt, voldoet een schip aan de eisen met betrekking tot het door die Verdragsluitende Regering vastgestelde beveiligingsniveau, indien dit beveiligingsniveau hoger is dan het door de Administratie voor dat schip vastgestelde beveiligingsniveau.

4 Schepen reageren zo spoedig mogelijk op iedere overschakeling op een hoger beveiligingsniveau.

5 Indien een schip zich niet houdt aan de eisen van dit hoofdstuk of van deel A van de ISPS-Code, dan wel niet kan voldoen aan de eisen met betrekking tot het door de Administratie of door een andere Verdragsluitende Regering vastgestelde en op dat schip van toepassing zijnde beveiligingsniveau, dan meldt het schip dit aan de betreffende bevoegde autoriteit alvorens over te gaan tot enige schip/haven raakvlak of alvorens de haven binnen te lopen, afhankelijk van de situatie die zich het eerst voordoet.

Voorschrift 5

Specifieke verantwoordelijkheid van de maatschappijen

De maatschappij zorgt ervoor dat de kapitein te allen tijde de informatie aan boord heeft aan de hand waarvan bevoegde ambtenaren van een Verdragsluitende Regering kunnen vaststellen:

- .1 wie verantwoordelijk is voor de aanwijzing van de bemanningsleden of andere personen die op dat moment in welke hoedanigheid dan ook aan boord van een schip in dienst of te werk gesteld zijn ten behoeve van dat schip;
- .2 wie degene is die beslist over de bezigheid van het schip; en
- .3 wanneer het schip gebruikt wordt in het kader van een charterpartij (charterpartijen), wie de partijen zijn bij deze charterpartij(en).

Voorschrift 6

Scheepsbeveiligingsalarmsysteem

- 1 Alle schepen worden uitgerust met een scheepsbeveiligingsalarmsysteem, en wel als volgt:
 - .1 op of na 1 juli 2004 gebouwde schepen;
 - .2 vóór 1 juli 2004 gebouwde passagiersschepen, met inbegrip van hogesnelheidspassagiersvaartuigen, uiterlijk op de datum van het eerste onderzoek van de radio-installatie na 1 juli 2004;
 - .3 vóór 1 juli 2004 gebouwde olietankschepen, chemicaliëntankers, gastankers, bulkcarriers en hogesnelheidsvrachtvaartuigen, met een brutotonnage van 500 of meer, uiterlijk op de datum van het eerste onderzoek van de radio-installatie na 1 juli 2004; en
 - .4 andere vrachtschepen met een brutotonnage van 500 of meer en booreenheden die vóór 1 juli 2004 gebouwd zijn, uiterlijk op de datum van het eerste onderzoek van de radio-installatie na 1 juli 2006.
- 2 Wanneer het scheepsbeveiligingsalarmsysteem wordt ingeschakeld:
 - .1 stelt het een schip/wal-beveiligingsalarm in werking en zendt dit naar een door de Administratie aangewezen bevoegde autoriteit, die in deze omstandigheden ook de maatschappij kan zijn, dat de identiteit en positie van het schip vermeldt en aangeeft of de beveiliging van het schip wordt bedreigd of in gevaar is gebracht;
 - .2 zendt het dit scheepsbeveiligingsalarm niet naar andere schepen;
 - .3 stelt het geen alarm aan boord van het schip in werking; en
 - .4 houdt het het scheepsbeveiligingsalarm in werking totdat het wordt uitgeschakeld en/of opnieuw wordt ingesteld.
- 3 Het scheepsbeveiligingsalarmsysteem:
 - .1 kan vanaf de navigatiebrug en op minstens één andere plaats worden ingeschakeld;
 - .2 voldoet aan prestatienormen die niet lager zijn dan de door de Organisatie aangenomen normen.

4 De inschakelpunten van het scheepsbeveiligingsalarmsysteem zijn zo ontworpen dat het scheepsbeveiligingsalarm niet per ongeluk kan worden ingeschakeld.

5 Aan de eis van een scheepsbeveiligingsalarmsysteem kan worden voldaan met een radio-installatie die is aangepast aan de eisen van hoofdstuk IV, maar dan ook aan alle eisen van dit voorschrift moet voldoen.

6 Wanneer een Administratie een melding binnenkrijgt van een scheepsbeveiligingsalarm, stelt die Administratie onmiddellijk de staat (staten) in de nabijheid waarvan het schip zich op dat moment bevindt in kennis.

7 Wanneer een Verdragsluitende Regering een melding ontvangt van een scheepsbeveiligingsalarm van een schip dat niet gerechtigd is onder zijn vlag te varen, stelt die Verdragsluitende Regering onmiddellijk de desbetreffende Administratie in kennis en, indien van toepassing, de staat (staten) in de nabijheid waarvan het schip zich op dat moment bevindt.

Voorschrift 7

Bedreigingen voor schepen

1 De Verdragsluitende Regeringen stellen beveiligingsniveaus vast, en zorgen ervoor dat in hun territoriale wateren varende schepen, of schepen die hebben medegedeeld dat zij van plan zijn zich in hun territoriale wateren te begeven, over deze beveiligingsniveaus worden geïnformeerd.

2 De Verdragsluitende Regeringen zorgen voor een aanspreekpunt waar deze schepen om raad of bijstand kunnen vragen, en waar zij eventuele met de beveiliging verband houdende zorgen over andere schepen, scheepsbewegingen of berichten kunnen melden.

3 Indien is vastgesteld dat er gevaar bestaat voor een aanval, licht de betrokken Verdragsluitende Regering de betrokken schepen en hun Administraties in over:

- .1 het huidige beveiligingsniveau;
- .2 de beveiligingsmaatregelen die de betrokken schepen moeten nemen om zichzelf tegen een aanval te beschermen, overeenkomstig de bepalingen van deel A van de ISPS-code; en
- .3 de beveiligingsmaatregelen die de kuststaat besloten heeft te nemen, naar gelang van toepassing.

Voorschrift 8

Beslissingsvrijheid van de kapitein met betrekking tot de veiligheid en beveiliging van het schip

1 De kapitein wordt niet door de maatschappij, de verlader of enige andere persoon weerhouden van het nemen of het uitvoeren van een

beslissing die naar het professionele oordeel van de kapitein moet worden genomen voor de veiligheid en ter beveiliging van het schip. Dit houdt ook in dat hij personen (behalve personen waarvan vaststaat dat zij naar behoren door een Verdragsluitende Regering zijn gemachtigd) of hun eigendommen de toegang kan ontzeggen en kan weigeren vracht, inclusief containers en andere afgesloten vrachttransporteenheden, aan boord te nemen.

2 Indien er tijdens de bedrijfsactiviteiten van het schip een situatie ontstaat, waarbij volgens het professioneel oordeel van de kapitein, voor het schip geldende eisen inzake veiligheid en beveiliging met elkaar in strijd zijn, geeft de kapitein uitvoering aan de eisen die noodzakelijk zijn voor de veiligheid van het schip. De kapitein kan in dergelijke gevallen tijdelijke beveiligingsmaatregelen treffen, en hij informeert onverwijld de Administratie en, indien van toepassing, de Verdragsluitende Regering van het land in wier haven het schip zich bevindt of voornemens is binnen te lopen. Al dergelijke tijdelijke beveiligingsmaatregelen in het kader van dit voorschrift dienen in de hoogst mogelijke mate afgestemd te zijn op het geldende beveiligingsniveau. Wanneer dergelijke gevallen worden vastgesteld, zorgt de Administratie ervoor dat deze strijdigheden worden opgelost en dat de kans op herhaling tot een minimum wordt beperkt.

Voorschrift 9

Controle- en handhavingsmaatregelen

1 Controle van schepen in de haven

- 1.1 Volgens dit hoofdstuk kan ieder schip waarop dit hoofdstuk van toepassing is in de haven van een andere Verdragsluitende Regering gecontroleerd worden door bevoegde ambtenaren van die regering, die eveneens de functies van voorschrift I/19 kunnen vervullen. Bij deze controle wordt alleen geverifieerd of het schip beschikt over een geldig internationaal scheepsbeveiligingscertificaat of een geldig voorlopig internationaal scheepsbeveiligingscertificaat dat is afgegeven krachtens het bepaalde in deel A van de ISPS-Code („certificaat”), hetgeen aanvaard wordt indien het geldig is, tenzij er gegronde redenen zijn om aan te nemen dat het schip niet voldoet aan de eisen van dit hoofdstuk of van deel A van de ISPS-Code.
- 1.2 Wanneer die gegronde redenen aanwezig zijn, of wanneer er desgevraagd geen geldig certificaat wordt overgelegd, leggen de bevoegde ambtenaren van de Verdragsluitende Regering één of meer controlemaatregelen op met betrekking tot het schip, overeenkomstig het bepaalde in paragraaf 1.3. Al deze opgelegde maatregelen moeten evenredig zijn en er moet rekening worden gehouden met de in deel B van de ISPS-Code gegeven richtsnoeren.

1.3. De volgende controlemaatregelen kunnen worden opgelegd: inspectie van het schip, ophouding van het schip, aanhouding van het schip, beperking van de bedrijfsvoering, met inbegrip van bewegingen binnen de haven, of uitwijzing van het schip uit de haven. Ter aanvulling van deze controlemaatregelen, of in plaats daarvan, kunnen ook andere, minder verregaande administratieve of corrigerende maatregelen worden genomen.

2 Schepen die voornemens zijn een haven van een andere Verdragsluitende Regering aan te doen

2.1 In de zin van dit hoofdstuk kan een Verdragsluitende Regering eisen dat schepen die voornemens zijn zijn havens aan te doen onderstaande informatie verschaffen aan bevoegde ambtenaren van die regering, teneinde de naleving van dit hoofdstuk te verzekeren voordat het schip de haven binnenloopt, en zo te vermijden dat er controlemaatregelen moeten worden opgelegd of stappen ondernomen:

- .1 of het schip beschikt over een geldig certificaat, en de naam van de autoriteit die het heeft uitgereikt;
- .2 het beveiligingsniveau waarop het schip momenteel opereert;
- .3 het beveiligingsniveau waarop het schip in een vorige haven heeft geopereerd, toen het een schip/haven raakvlak heeft uitgevoerd binnen het in paragraaf 2.3 aangegeven tijdsbestek;
- .4 eventuele speciale of aanvullende beveiligingsmaatregelen die door het schip zijn genomen in een vorige haven waar het een schip/haven raakvlak heeft uitgevoerd binnen het in paragraaf 2.3 aangegeven tijdsbestek;
- .5 of de passende scheepsbeveiligingsprocedures zijn gevolgd gedurende een schip-tot-schip-activiteit binnen het in paragraaf 2.3 vermelde tijdsbestek; of
- .6 andere praktische met beveiliging verband houdende informatie (maar geen details over het scheepsbeveiligingsplan) rekening houdend met de in deel B van de ISPS-Code gegeven richtsnoeren.

Indien de Verdragsluitende Regering dit vraagt, geven het schip of de maatschappij een voor die Verdragsluitende Regering aanvaardbare bevestiging van de hierboven verlangde informatie.

2.2 Ieder schip waarop dit hoofdstuk van toepassing is en dat van plan is de haven van een andere Verdragsluitende Regering aan te doen, verschaft de in paragraaf 2.1 beschreven informatie, indien de bevoegde ambtenaren van die regering dit vragen. De kapitein kan weigeren die informatie te verschaffen, maar dient wel te beseffen dat hem dan de toegang tot de haven kan worden ontzegd.

- 2.3 Het schip houdt voor de laatste tien havenfaciliteiten die het heeft aangedaan de in paragraaf 2.1 bedoelde gegevens bij.
- 2.4 Indien de bevoegde ambtenaren van de Verdragsluitende Regering van de haven die het schip voornemens is aan te doen na ontvangst van de in paragraaf 2.1 beschreven informatie gegronde redenen hebben om aan te nemen dat het schip niet aan de eisen van dit hoofdstuk of deel A van de ISPS-Code voldoet, proberen genoemde ambtenaren communicatie tot stand te brengen met het schip en tussen het schip en de Administratie om de niet-naleving recht te zetten. Indien deze communicatie niet leidt tot rechtzetting, of indien de ambtenaren ook anderszins gegronde redenen hebben om aan te nemen dat het schip niet voldoet aan de eisen van dit hoofdstuk of deel A van de ISPS-Code, kunnen deze ambtenaren met betrekking tot dat schip de in paragraaf 2.5 voorziene stappen zetten. Al dergelijke stappen moeten evenredig zijn en worden gezet aan de hand van de in deel B van de ISPS-Code gegeven richtsnoeren.
- 2.5 Genoemde stappen zijn:
- .1 een eis tot rechtzetting van de niet-naleving;
 - .2 een eis dat het schip zich begeeft naar een aangewezen plaats in de territoriale wateren of de binnenlandse wateren van die Verdragsluitende Regering;
 - .3 inspectie van het schip, indien het schip zich in de territoriale wateren bevindt van de Verdragsluitende Regering wier haven het schip voornemens aan te doen; of
 - .4 ontzegging van de toegang tot de haven.
- Alvorens tot dergelijke stappen over te gaan, stelt de Verdragsluitende Regering het schip op de hoogte van haar voornemens. De kapitein kan daarop afzien van zijn voornemen om die haven aan te doen. Dit voorschrift is dan niet van toepassing.

3 Aanvullende bepalingen

3.1 Indien:

- .1 een andere controlemaatregel wordt opgelegd dan een in paragraaf 1.3 bedoelde minder verregaande administratieve of corrigerende maatregel; of
- .2 één van de in paragraaf 2.5 bedoelde stappen wordt ondernomen, stelt een bevoegde ambtenaar van de Verdragsluitende Regering de Administratie onverwijld schriftelijk op de hoogte van de opgelegde controlemaatregelen of ondernomen stappen, alsmede van de redenen daarvoor. De Verdragsluitende Regering die de controlemaatregelen oplegt of de stappen onderneemt meldt ook aan het erkend beveiligingsbedrijf dat het certificaat voor het betreffende schip heeft afgegeven, en aan de Organisatie wanneer deze controlemaatregelen zijn opgelegd of

deze stappen zijn ondernomen.

- 3.2 Wanneer een schip de toegang tot de haven wordt ontzegd of wordt uitgewezen, dienen de havenstaatautoriteiten de bewuste feiten mede te delen aan de havenstaatautoriteiten van de volgende in aanmerking komende aanloophavens, indien deze bekend zijn, en eventuele andere in aanmerking komende kuststaten, rekening houdende met door de Organisatie te ontwikkelen richtsnoeren. De geheimhouding en beveiliging van deze meldingen worden gegarandeerd.
- 3.3 Het ontzeggen van de toegang tot de haven overeenkomstig de paragrafen 2.4 en 2.5 of uitwijzing overeenkomstig de paragrafen 1.1 tot en met 1.3 zijn maatregelen die alleen worden opgelegd wanneer de bevoegde ambtenaren van de Verdragssluitende Regering gegronde redenen hebben om aan te nemen dat het schip een onmiddellijke bedreiging vormt voor beveiliging of veiligheid van personen, of van schepen of andere goederen, en er geen andere passende middelen zijn om die dreiging weg te nemen.
- 3.4 De oplegging van de in paragraaf 1.3 bedoelde controlemaatregelen en het nemen van de in paragraaf 2.5 bedoelde stappen vinden overeenkomstig dit voorschrift niet langer plaats wanneer de niet-naleving die aanleiding gaf tot controlemaatregelen of stappen naar tevredenheid van de Verdragssluitende Regering is rechtgezet, rekening houdende met eventuele door het schip of de Administratie voorgestelde acties.
- 3.5 Wanneer Verdragssluitende Regeringen controle uitoefenen krachtens paragraaf 1 of stappen ondernemen krachtens paragraaf 2:
 - .1 wordt al het mogelijke gedaan om te vermijden dat een schip ten onrechte wordt aangehouden of opgehouden. Indien een schip daardoor ten onrechte wordt aangehouden of opgehouden, heeft het recht op schadevergoeding voor eventuele geleden verliezen of schade; en
 - .2 wanneer toegang tot het schip in noodgevallen en om humanitaire of beveiligingsredenen noodzakelijk is, mag deze niet worden belet.

Voorschrift 10

Eisen met betrekking tot havenfaciliteiten

1. Havenfaciliteiten voldoen aan de desbetreffende eisen van dit hoofdstuk en deel A van de ISPS-Code, rekening houdende met de in deel B van de ISPS-Code gegeven richtsnoeren.
2. Verdragssluitende Regeringen met op hun grondgebied een havenfaciliteit of havenfaciliteiten waarop dit voorschrift van toepassing is, zorgen ervoor dat:

- .1 de beveiligingsbeoordelingen van de havenfaciliteiten overeenkomstig de bepalingen van deel A van de ISPS-Code worden uitgevoerd, herzien en goedgekeurd; en
 - .2 de beveiligingsplannen van de havenfaciliteiten overeenkomstig de bepalingen van deel A van de ISPS-Code worden ontwikkeld, herzien, goedgekeurd en ten uitvoer gelegd.
3. De Verdragsluitende Regeringen moeten duidelijk aangeven en mededelen welke maatregelen in een beveiligingsplan van een havenfaciliteit voor de verschillende beveiligingsniveaus moeten worden opgenomen, waaronder wanneer een beveiligingsverklaring moet worden overgelegd.

Voorschrift 11

Alternatieve beveiligingsovereenkomsten

- 1 De Verdragsluitende Regeringen mogen, bij de implementatie van dit hoofdstuk en deel A van de ISPS-Code schriftelijk bilaterale of multilaterale overeenkomsten met andere Verdragsluitende Regeringen sluiten voor alternatieve beveiligingsregelingen met betrekking tot korte internationale reizen op vaste routes tussen op hun grondgebieden gelegen havenfaciliteiten.
- 2 Deze overeenkomsten gaan niet ten koste van het beveiligingsniveau van andere niet onder de overeenkomst vallende schepen of havenfaciliteiten.
- 3 Onder dergelijke overeenkomsten vallende schepen verrichten geen schip-tot-schip-activiteiten met niet onder de overeenkomst vallende schepen.
- 4 Deze overeenkomsten worden periodiek herzien, rekening houdend met de opgedane ervaring en eventuele wijzigingen van de specifieke omstandigheden of de beoordeelde bedreigingen voor de beveiliging van de onder de overeenkomst vallende schepen, havenfaciliteiten of routes.

Voorschrift 12

Gelijkwaardige beveiligingsregelingen

- 1 Een Administratie kan toestaan dat een bepaald schip, of een groep schepen, dat/die gerechtigd is onder haar vlag te varen andere met de in dit hoofdstuk of in deel A van de ISPS-Code voorgeschreven maatregelen gelijkstaande maatregelen uitvoert, mits deze beveiligingsmaatregelen minstens even doeltreffend zijn als de in dit hoofdstuk of deel A van de ISPS-Code voorgeschreven maatregelen. Een Administratie die dergelijke beveiligingsmaatregelen toestaat, deelt de bijzonderheden daaromtrent mede aan de Organisatie.

2 Bij de implementatie van dit hoofdstuk en deel A van de ISPS-Code kan een Verdragsluitende Regering een bepaalde op haar grondgebied gelegen havenfaciliteit, of groep havenfaciliteiten, die niet valt onder een krachtens voorschrift 11 gesloten overeenkomst toestaan beveiligingsmaatregelen te implementeren, mits deze beveiligingsmaatregelen minstens even doeltreffend zijn als de in dit hoofdstuk of deel A van de ISPS-Code voorgeschreven maatregelen. Een Verdragsluitende Regering die dergelijke beveiligingsmaatregelen toestaat deelt de bijzonderheden daaromtrent aan de Organisatie mede.

Voorschrift 13

Verschaffing van informatie

1 De Verdragsluitende Regeringen delen uiterlijk 1 juli 2004 de volgende gegevens mede aan de Organisatie, en stellen deze ter informatie ter beschikking van maatschappijen en schepen:

- .1 de namen en contactgegevens van hun nationale autoriteit of autoriteiten die verantwoordelijk zijn voor de beveiliging van schepen en havenfaciliteiten;
- .2 de locaties op hun grondgebied die onder de goedgekeurde beveiligingsplannen voor havenfaciliteiten vallen;
- .3 de namen en contactgegevens van degenen die zijn aangewezen om te allen tijde beschikbaar te zijn voor het ontvangen van en reageren op de schip/wal-beveiligingsalarmen, als bedoeld in voorschrift 6.2.1;
- .4 de namen en contactgegevens van degenen die zijn aangewezen om te allen tijde beschikbaar te zijn voor het ontvangen van en reageren op eventuele mededelingen van Verdragsluitende Regeringen die de controle- en nalevingsmaatregelen uitvoeren, als bedoeld in voorschrift 9.3.1; en
- .5 de namen en contactgegevens van degenen die zijn aangewezen om te allen tijde beschikbaar te zijn voor het adviseren of assisteren van schepen, en aan wie schepen eventuele met de beveiliging verband houdende zorgen als bedoeld in voorschrift 7.2 kunnen melden;

en actualiseren deze informatie, zodra zich daarin wijzigingen voordoen. De Organisatie verspreidt deze gegevens onder andere Verdragsluitende Regeringen ter informatie van hun beampten.

2 De Verdragsluitende Regeringen delen uiterlijk 1 juli 2004 aan de Organisatie de namen en contactgegevens mede van alle erkende beveiligingsorganisaties die bevoegd zijn namens hen op te treden, met de bijzonderheden van de specifieke verantwoordelijkheid van deze organisaties en de voorwaarden waaronder bevoegdheden aan hen zijn gedelegeerd. Deze gegevens worden geactualiseerd zodra zich daarin wijzigingen voordoen. De Organisatie verspreidt deze gegevens onder andere Verdragsluitende Regeringen ter informatie van hun ambtenaren.

3 De Verdragsluitende Regeringen verstrekken aan de Organisatie uiterlijk op 1 juli 2004 een lijst waarop de goedgekeurde havenbeveiligingsplannen voor de zich op hun grondgebied bevindende havenfaciliteiten vermeld staan, alsmede de door elk goedgekeurd havenbeveiligingsplan bestreken locatie of locaties, met bijbehorende goedkeuringsdatum, en doen nadien verdere mededelingen in geval van onderstaande wijzigingen:

- .1 wijzigingen met betrekking tot de door een goedgekeurd havenbeveiligingsplan bestreken locatie of locaties zullen worden ingevoerd of zijn ingevoerd. In deze gevallen worden de wijzigingen met betrekking tot de door het plan bestreken locatie of locaties medegedeeld, alsmede de datum waarop deze wijzigingen moeten worden ingevoerd of zijn geïmplementeerd;
- .2 een goedgekeurd havenbeveiligingsplan dat aanvankelijk op de bij de Organisatie ingediende lijst stond, zal worden ingetrokken of is ingetrokken. In deze gevallen moet worden medegedeeld op welke datum de intrekking zal ingaan of is ingegaan, en wordt de Organisatie zo spoedig als praktisch mogelijk is ingelicht.
- .3 de lijst van goedgekeurde havenbeveiligingsplannen zal worden uitgebreid. In deze gevallen moeten de door het plan bestreken locatie of locaties en de datum van goedkeuring worden medegedeeld.

4 De Verdragsluitende Regeringen verstrekken na 1 juli 2004 om de vijf jaar aan de Organisatie een herziene en bijgewerkte lijst, waarop alle goedgekeurde havenbeveiligingsplannen voor de zich op hun grondgebied bevindende havenfaciliteiten staan aangegeven met de door ieder goedgekeurd havenbeveiligingsplan bestreken locatie of locaties en de desbetreffende data van goedkeuring (en de datum van goedkeuring van eventuele wijzigingen), die volgt op en in de plaats komt van alle informatie die overeenkomstig paragraaf 3 gedurende de voorgaande vijf jaar is medegedeeld.

5 De Verdragsluitende Regeringen delen de Organisatie de overeenkomsten mede die krachtens voorschrift 11 zijn gesloten. De medegedeelde informatie omvat:

- .1 de namen van de Verdragsluitende Regeringen die de overeenkomst hebben gesloten;
- .2 de onder de overeenkomst vallende havenfaciliteiten en vaste routes;
- .3 de periodiciteit van de herziening van de overeenkomst;
- .4 de datum van inwerkingtreding van de overeenkomst; en
- .5 informatie over eventueel overleg dat heeft plaatsgevonden met andere Verdragsluitende Regeringen;

en naderhand delen zij zo spoedig als praktisch mogelijk is de Organisatie mede, wanneer de overeenkomst is gewijzigd of is afgelopen.

6 Iedere Verdragsluitende Regering die krachtens het bepaalde in voorschrift 12 gelijkwaardige beveiligingsregelingen toestaat met betrekking tot een schip dat gerechtigd is onder haar vlag te varen of met betrekking tot een op haar grondgebied gelegen havenfaciliteit deelt de bijzonderheden daaromtrent mede aan de Organisatie

7 De Organisatie stelt de krachtens de paragrafen 3 tot 6 medege-deelde informatie ter beschikking van andere Verdragsluitende Regeringen die daarom vragen.

Resolutie MSC.134(76) van 12 december 2002

Bij Resolutie MSC.134(76) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 12 december 2002 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeften in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zijn in overeenstemming met artikel VIII(b)(vi)(2)(bb) van het Verdrag op 1 januari 2004 aanvaard en zijn ingevolge artikel VIII(b)(vii)(2) op 1 juli 2004 in werking getreden.

Wat het Koninkrijk der Nederlanden betreft, gelden de wijzigingen voor het gehele Koninkrijk.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

Resolution MSC.134(76)

(adopted on 12 December 2002)

Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

The Maritime Safety Committee,

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as “the Convention”), concerning the amendment procedure applicable to the Annex to the Convention, other than to the provisions of chapter I thereof,

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

having considered, at its seventy-sixth session, amendments to the Convention, proposed and circulated in accordance with article VII-I(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 January 2004, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have notified their objections to the amendments;

3. Invites SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2004 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex

Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

CHAPTER II-1

CONSTRUCTION-STRUCTURE, SUBDIVISION AND STABILITY,
MACHINERY AND ELECTRICAL INSTALLATIONS

PART A-1

STRUCTURE OF SHIPS

1 The following new regulation 3-6 is added after existing regulation 3-5:

“Regulation 3-6

Access to and within spaces in the cargo area of oil tankers and bulk carriers

1 Application

1.1 Except as provided for in paragraph 1.2, this regulation applies to oil tankers of 500 gross tonnage and over and bulk carriers, as defined in regulation IX/1, of 20,000 gross tonnage and over, constructed on or after 1 January 2005.

1.2 Oil tankers of 500 gross tonnage and over constructed on or after 1 October 1994 but before 1 January 2005 shall comply with the provisions of regulation II-1/12-2 adopted by resolution MSC.27(61).

2 Means of access to cargo and other spaces

2.1 Each space within the cargo area shall be provided with a permanent means of access to enable, throughout the life of a ship, overall and close-up inspections and thickness measurements of the ship's structures to be carried out by the Administration, the company, as defined in regulation IX/1, and the ship's personnel and others as necessary. Such means of access shall comply with the requirements of paragraph 5 and with the Technical provisions for means of access for inspections, adopted by the Maritime Safety Committee by resolution MSC.133(76), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the Annex other than chapter I.

2.2 Where a permanent means of access may be susceptible to damage during normal cargo loading and unloading operations or where it is impracticable to fit permanent means of access, the Administration may allow, in lieu thereof, the provision of movable or portable means of access, as specified in the Technical provisions, provided that the means of attaching, rigging, suspending or supporting the portable means of access forms a permanent part of the ship's structure. All portable equipment shall be capable of being readily erected or deployed by ship's personnel.

2.3 The construction and materials of all means of access and their attachment to the ship's structure shall be to the satisfaction of the Administration. The means of access shall be subject to survey prior to, or in conjunction with, its use in carrying out surveys in accordance with regulation I/10.

3 Safe access to cargo holds, cargo tanks, ballast tanks and other spaces

3.1 Safe access* to cargo holds, cofferdams, ballast tanks, cargo tanks and other spaces in the cargo area shall be direct from the open deck and such as to ensure their complete inspection. Safe access* to double bot-

* Refer to the Recommendations for entering enclosed spaces aboard ships,

tom spaces may be from a pump-room, deep cofferdam, pipe tunnel, cargo hold, double hull space or similar compartment not intended for the carriage of oil or hazardous cargoes.

3.2 Tanks, and subdivisions of tanks, having a length of 35 m or more, shall be fitted with at least two access hatchways and ladders, as far apart as practicable. Tanks less than 35 m in length shall be served by at least one access hatchway and ladder. When a tank is subdivided by one or more swash bulkheads or similar obstructions which do not allow ready means of access to the other parts of the tank, at least two hatchways and ladders shall be fitted.

3.3 Each cargo hold shall be provided with at least two means of access as far apart as practicable. In general, these accesses should be arranged diagonally, for example one access near the forward bulkhead on the port side, the other one near the aft bulkhead on the starboard side.

4 Ship structure access manual

4.1 A ship's means of access to carry out overall and close-up inspections and thickness measurements shall be described in a Ship structure access manual approved by the Administration, an updated copy of which shall be kept on board. The Ship structure access manual shall include the following for each space in the cargo area:

- .1 plans showing the means of access to the space, with appropriate technical specifications and dimensions;
- .2 plans showing the means of access within each space to enable an overall inspection to be carried out, with appropriate technical specifications and dimensions. The plans shall indicate from where each area in the space can be inspected;
- .3 plans showing the means of access within the space to enable close-up inspections to be carried out, with appropriate technical specifications and dimensions. The plans shall indicate the positions of critical structural areas, whether the means of access is permanent or portable and from where each area can be inspected;
- .4 instructions for inspecting and maintaining the structural strength of all means of access and means of attachment, taking into account any corrosive atmosphere that may be within the space;
- .5 instructions for safety guidance when rafting is used for close-up inspections and thickness measurements;
- .6 instructions for the rigging and use of any portable means of access in a safe manner;
- .7 an inventory of all portable means of access; and
- .8 records of periodical inspections and maintenance of the ship's means of access.

adopted by the Organization by resolution A.864(20).

4.2 For the purpose of this regulation “critical structural areas” are locations which have been identified from calculations to require monitoring or from the service history of similar or sister ships to be sensitive to cracking, buckling, deformation or corrosion which would impair the structural integrity of the ship.

5 General technical specifications

5.1 For access through horizontal openings, hatches or manholes, the dimensions shall be sufficient to allow a person wearing a self-contained air-breathing apparatus and protective equipment to ascend or descend any ladder without obstruction and also provide a clear opening to facilitate the hoisting of an injured person from the bottom of the space. The minimum clear opening shall not be less than 600 mm x 600 mm. When access to a cargo hold is arranged through the cargo hatch, the top of the ladder shall be placed as close as possible to the hatch coaming. Access hatch coamings having a height greater than 900 mm shall also have steps on the outside in conjunction with the ladder.

5.2 For access through vertical openings, or manholes, in swash bulkheads, floors, girders and web frames providing passage through the length and breadth of the space, the minimum opening shall be not less than 600 mm x 800 mm at a height of not more than 600 mm from the bottom shell plating unless gratings or other foot holds are provided.

5.3 For oil tankers of less than 5,000 tonnes deadweight, the Administration may approve, in special circumstances, smaller dimensions for the openings referred to in paragraphs 5.1 and 5.2, if the ability to traverse such openings or to remove an injured person can be proved to the satisfaction of the Administration.

PART B

SUBDIVISION AND STABILITY

Regulation 12-2

Access to spaces in the cargo area of oil tankers

2 The existing regulation 12-2 is deleted.

PART C

MACHINERY INSTALLATIONS

Regulation 31

Machinery control

3 The following new subparagraph .10 is added to paragraph 2 of the regulation:

“.10 automation systems shall be designed in a manner which ensures that threshold warning of impending or imminent slowdown or shutdown of the propulsion system is given to the officer in charge of the navigational watch in time to assess navigational circumstances in an emergency. In particular, the systems shall control, monitor, report, alert and take safety action to slow down or stop propulsion while providing the officer in charge of the navigational watch an opportunity to manually intervene, except for those cases where manual intervention will result in total failure of the engine and/or propulsion equipment within a short time, for example in the case of overspeed.”

CHAPTER II-2

CONSTRUCTION-FIRE PROTECTION, FIRE DETECTION AND FIRE EXTINCTION

Regulation 3

Definitions

4 In paragraph 20, the words “regulation VII/2” are replaced by the words “the IMDG Code, as defined in regulation VII/1.1”.

Regulation 19

Carriage of dangerous goods

5 In table 19.3, in vertical columns 7 and 8 (concerning flashpoints of class 3), the numbers “3.1 3.2. and “3.3”, respectively, are replaced by the number “3”.

6 In table 19.3, in vertical column 13 (concerning class 5.2), the character “X” in rows 15 (concerning paragraph 3.10.1) and 16 (concerning paragraph 3.10.2) is replaced by the character “X¹⁶” and a new note 16 is added as follows:

“¹⁶ Under the provisions of the IMDG Code, as amended, stowage of class 5.2 dangerous goods under deck or in enclosed ro-ro spaces is prohibited”.

CHAPTER III

LIFE-SAVING APPLIANCES AND ARRANGEMENTS

Regulation 26

Additional requirements for ro-ro passenger ships

7 The following new subparagraph .4 is added at the end of paragraph 1:

“.4 before 1 July 2004 shall comply with the requirements of paragraph 2.5 not later than the first survey on or after that date.”

8 The following new subparagraph .5 is added at the end of paragraph 2:

“.5 Liferrafts carried on ro-ro passenger ships shall be fitted with a radar transponder* in the ratio of one transponder for every four liferafts. The transponder shall be mounted inside the liferaft so its antenna is more than one metre above the sea level when the liferaft is deployed, except that for canopied reversible liferafts the transponder shall be so arranged as to be readily accessed and erected by survivors. Each transponder shall be arranged to be manually erected when the liferaft is deployed. Containers of liferafts fitted with transponders shall be clearly marked.

CHAPTER XII

ADDITIONAL SAFETY MEASURES FOR BULK CARRIERS

9 The following new regulations 12 and 13 are added after existing regulation 11:

“Regulation 12

Hold, ballast and dry space water level detectors

(This regulation applies to bulk carriers regardless of their date of construction)

1 Bulk carriers shall be fitted with water level detectors:

- .1 in each cargo hold, giving audible and visual alarms, one when the water level above the inner bottom in any hold reaches a height of 0.5 m and another at a height not less than 15% of the depth of the cargo hold but not more than 2 m. On bulk carriers to which regulation 9.2 applies, detectors with only the latter alarm need be installed. The water level detectors shall be fitted in the aft end of the cargo holds. For cargo holds which are used for water ballast, an alarm overriding device may be installed. The visual alarms shall clearly discriminate between the two different water levels detected in each hold;
- .2 in any ballast tank forward of the collision bulkhead required by Regulation II-1/11, giving an audible and visual alarm when the liquid in the tank reaches a level not exceeding 10% of the tank capacity. An alarm overriding device may be installed to

* Refer to the Performance standards for survival craft radar transponders for use in search and rescue operations, adopted by the Organization by resolution A.802(19).”

- be activated when the tank is in use; and
- .3 in any dry or void space other than a chain cable locker, any part of which extends forward of the foremost cargo hold, giving an audible and visual alarm at a water level of 0.1 m above the deck. Such alarms need not be provided in enclosed spaces the volume of which does not exceed 0.1% of the ship's maximum displacement volume.
- 2 The audible and visual alarms specified in paragraph 1 shall be located on the navigation bridge.
- 3 Bulk carriers constructed before 1 July 2004 shall comply with the requirements of this regulation not later than the date of the annual, intermediate or renewal survey of the ship to be carried out after 1 July 2004, whichever comes first.

Regulation 13

Availability of pumping systems

(This regulation applies to bulk carriers regardless of their date of construction)

1 On bulk carriers, the means for draining and pumping ballast tanks forward of the collision bulkhead and bilges of dry spaces any part of which extends forward of the foremost cargo hold shall be capable of being brought into operation from a readily accessible enclosed space, the location of which is accessible from the navigation bridge or propulsion machinery control position without traversing exposed freeboard or superstructure decks. Where pipes serving such tanks or bilges pierce the collision bulkhead, valve operation by means of remotely operated actuators may be accepted, as an alternative to the valve control specified in regulation II-1/11.4, provided that the location of such valve controls complies with this regulation.

2 Bulk carriers constructed before 1 July 2004 shall comply with the requirements of this regulation not later than the date of the first intermediate or renewal survey of the ship to be carried out after 1 July 2004, but in no case later than 1 July 2007."

Resolutie MSC.142(77) van 5 juni 2003

Bij Resolutie MSC.142(77) heeft de Maritieme Veiligheidscommissie van de Internationale Maritieme Organisatie op 5 juni 2003 in overeenstemming met artikel VIII(b)(iv) van het Verdrag wijzigingen aangenomen.

De wijzigingen behoeven in overeenstemming met artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen zullen ingevolge artikel VIII(b)(vii)(2) op 1 juli 2006 in werking treden, tenzij vóór 1 januari 2006 meer dan een derde van de Verdragsluitende Regeringen, hetzij Verdragsluitende Regeringen waarvan de gezamenlijke koopvaardijvloeden niet minder dan vijftig procent van de bruto tonnage van de wereldkoopvaardijvloot vormen, de Secretaris-Generaal van de Internationale Maritieme Organisatie ervan in kennis stellen, dat zij bezwaar hebben tegen de wijzigingen.

De Engelse tekst¹⁾ van de resolutie luidt als volgt:

Resolution MSC.142(77)

(adopted on 5 June 2003)

Adoption of Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

The maritime safety committee,

Recalling Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

Recalling further article VIII(b) of the International Convention for the Safety of Life at Sea (SOLAS), 1974 (hereinafter referred to as “the Convention”), concerning the amendment procedure applicable to the Annex to the Convention, other than to the provisions of chapter I thereof,

Having considered, at its seventy-seventh session, amendments to the Convention, proposed and circulated in accordance with article VII-I(b)(i) thereof,

1. Adopts, in accordance with article VIII(b)(iv) of the Convention, amendments to the Convention, the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article viii(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 January 2006, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world’s merchant fleet, have notified their objections to the amendments;

3. Invites SOLAS Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 July 2006 upon their acceptance in accordance with paragraph 2 above;

4. Requests the Secretary-General, in conformity with article VII-I(b)(v) of the Convention, to transmit certified copies of the present reso-

¹⁾ De Chinese, de Franse, de Russische en de Spaanse tekst zijn niet afgedrukt.

lution and the text of the amendments contained in the Annex to all Contracting Governments to the Convention;

5. Further requests the Secretary-General to transmit copies of this resolution and its Annex to Members of the Organization, which are not Contracting Governments to the Convention.

Annex

Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended

CHAPTER V

SAFETY OF NAVIGATION

Regulation 2

Definitions

- 1 The following new paragraph 4 is added after existing paragraph 3:
“4 Length of a ship means its length overall.”

Regulation 22

Navigation bridge visibility

- 2 The existing text of introductory paragraph 1 is replaced by the following:

“1 Ships of not less than 55 m in length, as defined in regulation 2.4, constructed on or after 1 July 1998, shall meet the following requirements:”

Regulation 28

Records of navigational activities

- 3 The title of the regulation is replaced by the following:
“Records of navigational activities and daily reporting.
4 The existing paragraph is numbered as paragraph 1.
5 The following new paragraph 2 is added after paragraph 1:
.2 Each ship of 500 gross tonnage and above, engaged on international voyages exceeding 48 hours, shall submit a daily report to its company, as defined in regulation IX/1, which shall retain it and all subsequent daily reports for the duration of the voyage. Daily reports may be transmitted by any means, provided that they are

transmitted to the company as soon as practicable after determination of the position named in the report. Automated reporting systems may be used, provided that they include a recording function of their transmission and that those functions and interfaces with position-fixing equipment are subjected to regular verification by the ship's master. The report shall contain the following:

- .1 ship's position;
- .2 ship's course and speed; and
- .3 details of any external or internal conditions that are affecting the ship's voyage or the normal safe operation of the ship.

In overeenstemming met artikel 19, tweede lid, van de Rijkswet goedkeuring en bekendmaking verdragen heeft de Minister van Buitenlandse Zaken bepaald dat het Verdrag zal zijn bekendgemaakt in Nederland op de dag na de datum van uitgifte van dit Tractatenblad.

Uitgegeven de *achtste* maart 2005.

De Minister van Buitenlandse Zaken,

B. R. BOT

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