## 第 72/2014 號行政長官公告

中華人民共和國是國際海事組織的成員國及一九七四年十一月一日訂於倫敦的《國際海上人命安全公約》（下稱“公約”）的締約國；

國際海事組織海上安全委員會於一九九六年十二月五日透過第MSC.57（67）號決議通過了公約的修正案；

中華人民共和國於一九九九年十二月十三日以照會通知聯合國秘書長，經修訂的公約自一九九九年十二月二十日起適用於澳門特別行政區；

基於此，行政長官根據澳門特別行政區第3/1999號法律第六條第一款的規定，命令公佈包含上指修正案的第MSC.57（67）號決議的中文及英文正式文本。

二零一四年十月十五日發佈。

行政長官　崔世安

## Aviso do Chefe do Executivo n.º 72/2014

Considerando que a República Popular da China é um Estado Membro da Organização Marítima Internacional e um Estado Contratante da Convenção Internacional para a Salvaguarda da Vida Humana no Mar, concluída em Londres em 1 de Novembro de 1974, adiante designada por Convenção;

Considerando igualmente que, em 5 de Dezembro de 1996, o Comité de Segurança Marítima da Organização Marítima Internacional, através da resolução MSC.57(67), adoptou emendas à Convenção;

Considerando ainda que a República Popular da China, por nota datada de 13 de Dezembro de 1999, notificou o Secretário-Geral das Nações Unidas sobre a aplicação da Convenção, tal como emendada, na Região Administrativa Especial de Macau, a partir de 20 de Dezembro de 1999;

O Chefe do Executivo manda publicar, nos termos do n.º 1 do artigo 6.º da Lei n.º 3/1999 da Região Administrativa Especial de Macau, a resolução MSC.57(67), que contém as referidas emendas, nos seus textos autênticos em línguas chinesa e inglesa.

Promulgado em 15 de Outubro de 2014.

O Chefe do Executivo, *Chui Sai On*.

# 第 MSC.57（67）號決議

## （1996 年 12 月 5 日通過）

## 通過《1974 年國際海上人命安全公約》修正案

**海上安全委員會**，

**憶及**《國際海事組織公約》關於本委員會職責的第 28（b）條，

**還憶及**《1974 年國際海上人命安全公約》（以下簡稱“本公約”）關於除本公約附件第 I 章規定外的修正程序的第 VIII（b）條，

在其第六十七次會議上，**審議了**根據本公約第 VIII（b）（i）條提議並分發的本公約修正案，

1. 按照本公約第 VIII（b）（iv）條**通過**本公約的修正案，其文本載於本決議的附件中；

2. 按照本公約第 VIII（b）（vi）（2）（bb）條**決定**：這些修正案將於 1998 年 1 月 1 日被視為已獲接受，除非在該日期前，有超過三分之一的本公約締約政府或合計商船隊不少於世界商船隊總噸位 50%的締約政府通知反對這些修正案；

3. **提請**各締約政府注意，按照本公約第 VIII（b）（vii）（2）條，這些修正案按照上述第 2 段獲得接受後，應於 1998 年 7 月 1 日生效；

4. **要求**秘書長按照本公約第 VIII（b）（v）條，將本決議和附件中所載修正案文本的核證副本轉發給公約的所有締約政府；

5. **還要求**秘書長將本決議及其附件的副本轉發給非本公約締約政府的本組織會員。

# 附件

# 《1974 年國際海上人命安全公約》修正案

## 第 II-1 章

## 構造－分艙和穩性、機電設備

## A-1 部分－船舶結構

1 第 II-1 章 A-1 部分新增以下第 3-3 和 3-4 條：

**“第 3-3 條**

**安全通向液貨船船艏**

1 就本條和第 3-4 條而言，液貨船包括第 2.12 條所定義的油輪、第 VII/8.2 條所定義的化學品船和第 VII/11.2 條所定義的氣體運輸船。

2 1998 年 7 月 1 日或以後建造的所有液貨船都應提供即使在惡劣的氣候條件下船員仍能安全通向船艏的裝置。對於 1998 年 7 月 1 日以前建造的液貨船，應在 1998 年 7 月 1 日以後的第一次定期塢修時提供這種通向裝置，但不得晚於 2001 年 7 月 1 日。這種通向裝置應由主管機關根據本組織制定的指南予以認可。

**第 3-4 條**

**液貨船上的緊急拖帶裝置**

1996 年 1 月 1 日或以後建造的不小於 20,000 載重噸的所有液貨船上都應在兩端裝有緊急拖帶裝置。對於 1996 年 1 月 1 日以前建造的液貨船，應在 1996 年 1 月 1 日以後的第一次定期塢修時安裝這一裝置，但不得晚於 1999 年 1 月 1 日。這種裝置的設計和構造應由主管機關根據本組織制定的指南予以認可。”

**B 部分－分艙與穩性**

2 在現有第 17 條後新增以下第 17-1 條：

**“第 17-1 條**

**客船艙壁甲板和貨船乾舷甲板**

**以下的外板上的開口**

儘管有第 17 條的要求，1998 年 7 月 1 日或以後建造的船舶應符合第 17 條的要求，在提及“限界線”時應被視為是指客船艙壁甲板和貨船乾舷甲板。”

## C 部分－機器設備

**第 26 條－通則**

3 在現有第 8 款後新增以下第 9、10、11 款：

“9 如果管系中的非金屬膨脹接頭位於貫穿船舶側面的系統中，並且該貫穿和非金屬膨脹接頭都位於最深載重水線下，應作為第 I/10（a）條中所述檢驗的一部分加以檢查，並視必要或按製造商建議的時間間隔進行更換。

10 對船舶安全操作至關重要的操作和維護須知以及船舶機器和設備的機械圖紙，應以使那些在履行其職責時要求能理解此類信息的高級船員或普通船員能看懂的語言來書寫。

11 燃油供應艙、沉澱艙和潤滑油艙的通風管路的位置和佈置應為萬一通風管路發生破裂時，亦不會直接導致濺起的海水或雨水進入的危險。在每艘新船上都應為船舶推進和關鍵系統或等效裝置所必需的每種船用燃料提供兩個燃料油供應艙，其容量為在推進裝置以最大連續額定功率工作和發電機在海上時的一般工作負荷下至少能使用 8 小時。本款只適用於 1998 年 7 月 1 日以後建造的船舶。”

**第 31 條－機器控制**

4 在現有第 4 款後新增以下第 5 款：

“5 1998 年 7 月 1 日或以後建造的船舶應符合以下經修正的第 1 到第 4 項的要求：

.1 第 1 款由以下文字代替：

“1 對船舶推進、控制和安全至關重要的主機和輔機應配備有效的操縱和控制裝置。所有對船舶推進、控制和安全起關鍵作用的控制系統應相互獨立，或設計成一個系統失靈不降低另一系統的性能。”；

.2 在第 2 項的第 2 和第 3 行，刪掉“而機器處所擬有人值班”幾個字；

.3 第 2.2 項的第一句話由以下文字代替：

“.2 每個獨立推進器應由一單獨控制裝置進行控制，自動控制所有相關的作業，必要時還應包括防止推進機械過載的裝置。”；

.4 第 2.4 項由以下文字代替：

“.4 來自駕駛室的推進機械指令應在主機控制室和操縱台上顯示；”；

.5 在第 2.6 項末尾新增如下一句：

“還應能在有關機器上或機器附近控制對船舶推進和安全起關鍵作用的輔機”；和

.6 第 2.8、2.8.1 和 2.8.2 項由以下文字代替：

“.8 在駕駛室、主機控制室內和操縱台上應安裝顯示器，以指示：

.8.1 固定螺距推進器的轉速和轉動方向；和

.8.2 可調螺距推進器的轉速和螺距位置；” 。

## D 部分－電氣設備

**第 41 條－主電源和照明系統**

5 在現有第 4 款後新增以下第 5 款：

“5 1998 年 7 月 1 日或以後建造的船舶：

.1 除應符合第 1 到第 3 款的規定以外，還應符合以下要求：

.1.1 如果主電源為船舶推進和操舵裝置之必需，該系統應佈置成：能向推進和操舵裝置和保證船舶安全所必需的設備保持供電，或當正在工作的任何發電機發生故障時，能立即恢復供電；

.1.2 應提供卸載或其他等效裝置，以防止本條所要求的發電機持續過載；

.1.3 如果主電源是船舶推進所必需，主匯流排應至少分成兩個部分，它們通常應由斷路繼電器或其他經認可的裝置加以連接；只要可能，發電機組和其他雙套設備的連接應在這些部件之間平均分配；和

.2 不必符合第 4 款的要求。”

**第 42 條－客船應急電源**

6 在現有第 3.3 款後新增以下第 3.4 款：

"3.4 對於 1998 年 7 月 1 日或以後建造的船舶，如果電源為恢復推進所必需，其能量應足以與其他機器一起，在停電後 30 分鐘內使死船狀態下的船舶恢復推進。"

**第 43 條－貨船應急電源**

7 在現有第 3.3 款後新增以下第 3.4 款：

"3.4 對於 1998 年 7 月 1 日或以後建造的船舶，如果電源為恢復推進所必需，其能量應足以與其他機器一起，在停電後 30 分鐘內使死船狀態下的船舶恢復推進。"

## 第 II-2 章

## 構造－防火、探火和滅火

### A 部分－通則

**第 1 條－適用範圍**

8 現有第 1.1 款由以下文字代替：

"1.1 除另有明文規定外，本章應適用於 1998 年 7 月 1 日或以後安放龍骨或處於相應建造階段的船舶。"

9 現有第 1.3.2 款由以下文字代替：

“.2 *所有船舶*係指 1998 年 7 月 1 日以前或以後建造的船舶。”

10 現有第 2 款由以下文字代替：

“2 除另有明文規定外，對於 1998 年 7 月 1 日以前建造的船舶，主管機關應確保其符合經第 MSC.1(XLV)、MSC.6(48)、MSC.13(57)、MSC.22(59)、MSC.24(60)、MSC.27(61)、MSC.31(63)號決議修正的《1974 年國際海上人命安全公約》第 II-2 章中適用的要求。”

11 在第 3.1 款中，“1986 年 7 月 1 日”的表述改為“1998 年 7 月 1 日”。

**第 3 條－定義**

12 現有第 1 款由以下文字代替：

“1 *不燃材料*係指某種材料在加熱至約 750°C 時，既不燃燒，也不發出足以造成自燃的易燃蒸氣，此係根據《耐火試驗程序規則》確定。任何其他材料均為可燃材料。”

13 現有第 2 款由以下文字代替：

“2 *標準耐火試驗*係指將需要試驗的艙壁或甲板的樣品置於試驗爐內，按近似於標準的時間－溫度曲線的溫度進行加熱。試驗方法應符合《耐火試驗程序規則》。”

14 把第 3.4 款中的“139°C”換成“140°C”。

15 現有第 3.5 款由以下文字代替：

“.5 主管機關應要求按《耐火試驗程序規則》進行一次艙壁或甲板原型試驗，以確保其滿足上述完整性及温升的要求。”

16 把第 4.2 款中的“139°C”換成“140°C”。

17 現有第 4.4 款由以下文字代替：

“.4 主管機關應要求按《耐火試驗程序規則》進行一次原型分隔試驗，以確保其滿足上述完整性及温升的要求。”

18 現有第 8 款由以下文字代替：

“8 *低播焰性*係指所述表面能有效地限制火焰的蔓延，此係根據《耐火試驗程序規則》確定。”

19 現有第 22-1 款由以下文字代替：

“22-1 *中心控制站*是集中以下控制和指示功能的控制站：

.1 固定探火和警報系統；

.2 自動噴水器、探火和警報系統；

.3 防火門指示板；

.4 防火門封閉；

.5 水密門指示板；

.6 水密門封閉；

.7 通風扇；

.8 通用/火災報警器；

.9 包括電話在內的通信系統；和

.10 公共廣播系統的麥克風。”

20 現有第 23.3 款由以下文字代替：

“.3 所有帷幔、窗簾和其他懸掛織物材料具有不低於每平方米重 0.8 公斤的毛織品的阻止火焰蔓延的特性，此係根據《耐火試驗程序規則》確定。”

21 現有第 23.4 款由以下文字代替：

“.4 所有地板覆蓋物具有低播焰性。”

22 現有第 23.6 款由以下文字代替：

“.6 所有裝飾家具具有阻燃和阻止火焰蔓延的特性，此係根據《耐火試驗程序規則》確定。”

23 新增以下第 23.7 款：

“.7 所有臥具材料具有阻燃和阻止火焰蔓延的特性，此係根據《耐火試驗程序規則》確定。”

24 新增以下第 34 款：

“34 *《耐火試驗程序規則》*係指本組織海上安全委員會以第 MSC.61（67）號決議通過的《國際耐火試驗程序應用規則》；此規則可由本組織修正，只要此種修正案係按本公約關於適用於除附件第 I 章外的修正程序的第 VIII 條的規定通過、生效和實施。”

**第 12 條－自動噴水器、探火和失火報警系統**

25 現有第 1.2 款由以下文字代替：

"1.2 噴水器的每一分區均應包括聲視報警信號裝置，當任一噴水器動作時，能在一個或幾個指示裝置中自動發出信號。這種報警系統應能夠顯示出系統中發生的任何故障。這種裝置應能夠顯示出該系統所服務的哪一分區發生了火災，並應在駕駛室內集中顯示，此外，該裝置所發出的聲視報警還應設置在駕駛室以外的某一處所，以確保火警指示能立即被船員收到。"

26 刪去現有第 1.2.1 和 1.2.2 款。

**第 16 條－載客超過 36 人客船以外船舶的通風系統**

27 現有第 1.1 款由以下文字代替：

".1 這些導管應為具有低播焰性的材料。"

28 新增以下第 11 款：

"11 下列裝置應按《耐火試驗程序規則》進行試驗：

.1 擋火閘，包括有關操作設備；和

.2 穿過"A"級分隔的導管，若鋼套管係通過鉚接或螺栓法蘭或焊接的方式直接與通風管連接，則不需試驗。"

**第 17 條－消防員裝備**

29 在第 3.1.1 款結尾增加以下內容：

"但是，對於構成單獨主豎區的梯道圍壁和不包含第 26.2.2

（6）、（7）、（8）或（12）類處所的船舶前、後端主豎區，不需要額外的消防員裝備。”

**第 18 條－雜項**

30 刪去該條標題下括號內第一句話中的“和 8”兩個字，而增加下面一句話：

“本條第 8 款適用於 1998 年 7 月 1 日或以後建造的船舶。”

31 現有第 8 款由以下文字代替：

“8 有關直升飛機設施的規定應與本組織制訂的標準相一致。”

## B 部分－客船的消防安全措施

**第 24 條－主豎區和水平區**

32 現有第 1.1 款的第三句話用以下文字代替：

“如果第 26.2.2（5）、（9）或（10）類處所位於分隔的一側或燃油艙位於分隔的兩側，標準可降低到 A-0。”

**第 26 條－載客超過 36 人的客船艙壁和甲板的耐火完整性**

33 將第 1 款中的“26.1 至 26.4”換成“26.1 和 26.2”，並在表 26.1 的第 6、7、8 和 9 欄下第四行加上角註符號“d”，並增加如下一條註釋：

"[d] 如果 6、7、8 和 9 類處所完全位於集合地點範圍之外，這些處所的艙壁允許具有"B-0"級完整性。聲、視和光裝置的控制位置可以被看作是集合地點的一部分。"

**第 28 條 — 脫險通道**

34 將第 1.10 款結尾的"。"換成"；和"。

35 新增第.11 款如下：

".11 在所有載客超過 36 人的客船上，第 1.10 款和第 41-2.4.7 條的要求還應適用於船員居住區域。"

**第 30 條 — "A"級分隔上的開口**

36 現有第 4 款由以下文字代替：

"4 除動力操縱的水密門和經常封閉的水密門以外，主豎區艙壁、厨房邊壁和梯道圍壁上的防火門，應滿足以下要求：

.1 這些門應為自閉式，且在朝關閉的相反方向傾斜達 3.5° 時能夠關閉；

.2 鉸鏈防火門在船舶處於豎直位置時從動作開始到關閉的大約時間應不超過 40 秒，且不少於 10 秒。滑動防火門在船舶處於豎直位置時從動作開始到關閉的大約平均關閉速度應不高於每秒 0.2 米，且不低於每秒 0.1 米；

.3 這些門應能夠從連續有人的中央控制站同時或成組地遙控開啟，也能從門的兩側單個地開啟。開啟用的栓銷應具有防止該系統自動復位的開－關功能；

.4 禁止使用不能由中央控制站開啟的速脫鈎；

.5 從中央控制站關閉的門應能夠從門的兩側通過現場控制器重新打開。現場打開以後，門應再次自動關閉；

.6 在連續有人的中央控制站防火門指示板上應指示出是否每一遙控開啟的門都是關閉的；

.7 開啟裝置應設計成在控制系統或主動力源出現故障時，門將自動關閉；

.8 對於動力操縱門系統，應在緊靠門的附近提供現場蓄電裝置，以使門在控制系統或主動力源故障後使用現場控制器至少能夠操作(全開和全關)十次；

.9 某一門的控制系統或主動力源故障時，不應妨礙其他門的安全運作；

.10 遙控開啟滑動或動力操縱門應裝有聲音警報，在門由中央控制站開啟後和門開始動作前至少發聲 5 秒，但不超過 10 秒，直到門完全關閉；

.11 被設計成在行程中遇到障礙時能重新開啟的門，其重新開啟從接觸點開始應不超過 1 米；

.12 由於防火完整性的需要而裝有門閂的雙葉門，在使用控制系統開啓時，應具有隨門的操作自動啓動的門閂；

.13 動力操縱和自動關閉的直接通向特殊類別處所的門，不需裝備.3 和.10 要求的報警和遙控開啟裝置；

.14 現場控制系統的構件應易於進行維護和調整；

.15 動力操縱門應配有在發生火災時能夠操作的經認可的控制系統，此係依照《耐火試驗程序規則》確定。該系統應滿足以下要求：

.15.1 在有動力供應時，控制系統應能使門在至少 200°C 的溫度中運作至少 60 分鐘；

.15.2 所有沒受火災影響的其他門的動力供應不受到妨礙；和

.15.3 在溫度超過 200°C 時，控制系統應自動脫離動力供應並能夠在至少 945°C 時使門保持關閉。”

37 現有第 6 款的第二句話由以下文字代替：

“船舶外部限界的“A”級完整性要求，除位於上層建築和面對救生設備的甲板室、登乘和外部集合區、外面樓梯和用作逃生通道的開敞甲板上的門以外，不適用於外部門。梯道圍壁門無需滿足這一要求。”

**第 32 條 — 通風系統**

38 現有第 1.1 款由以下文字代替：

“1.1 載客超過 36 人的客船的通風系統除應滿足本條這一部分的要求外，還應符合第 16.2 至 16.6、16.8、16.9 和 16.11 條的要求。”

39 現有第 1.4.3.1 款由以下文字代替：

“.3.1 此導管用具有低播焰性的材料建造；”

**第 34 條－易燃材料的限制使用**

40 現有第 2 款由以下文字代替：

“2 用於冷卻系統的與隔熱物一併使用的防潮層和黏合劑及管系裝置的隔熱物，毋須是不燃的，但其應保持在實際可行的最低數量，並且它們的外露表面應具有低播焰性。”

41 現有第 7 款由以下文字代替：

“7 用於外露的內部表面的油漆、清漆和其他表面塗料不應產生過量的煙和毒性物，此係根據《耐火試驗程序規則》確定。”

42 現有第 8 款由以下文字代替：

“8 如果在起居處所、服務處所及控制站內採用甲板基層敷料，這些敷料應為在高溫時不易着火或產生毒性或爆炸性危險物的經認可的材料，此係根據《耐火試驗程序規則》確定。”

**第 37 條－特種處所的保護**

43 在第 1.2.1 款增加如下第三句話：

“如果燃油艙位於特種處所之下，這些處所間甲板的完整性可降至“A-0”標準。”

44 新增如下第 4 款：

**“4 永久性通風開口**

位於特種處所側壁板、端壁或艙壁上的永久性開口的位置，應使發生在特種處所的火災不致威脅積載區域和救生艇筏的

登乘站以及起居處所、服務處所、上層結構中的控制站和特種處所之上的甲板室。”

**第 38 條－除特種處所外，用於載運油箱中備有自用燃料的機動車輛的貨物處所的保護**

45 新增如下第 5 款和第 6 款：

**“5 永久性通風開口**

位於貨物處所側壁板、端壁或艙壁上的永久性開口的位置，應使發生在貨物處所的火災不致威脅積載區域和救生艇筏的登乘站以及起居處所、服務處所、上層結構中的控制站和貨物處所之上的甲板室。

**6 結構保護**

1998 年 7 月 1 日或以後建造的船舶的滾裝貨物處所，應符合第 38-1 條第 1.1、1.2 和第 1.3 款的要求。”

46 新增如下第 38-1 條：

**“第 38-1 條**

**除特種處所和用於載運油箱中備有燃料的機動車輛的滾裝貨物處所外，對封閉和開敞滾裝貨物處所的保護**

**1 通則**

1.1 第 37.1.1 條規定的基本原則也適用於本條。

1.2 在載客超過 36 人的客船上，邊界艙壁及封閉和開敞滾裝貨物處所的甲板應按“A-60”級標準隔熱。但是，如果第 26.2.2（5）、（9）或（10）類處所位於分隔的一側，該標準可降至“A-0”。如果燃油艙位於滾裝貨物處所之下，這些處所間甲板的完整性可降至“A-0”標準。

1.3 在載客不超過 36 人的客船上，邊界艙壁及封閉和開敞滾裝貨物處所的甲板應具有表 27.1 第（8）類處所所要求的防火完整性和表 27.2 第（8）類處所所要求的水平邊界。

1.4 位於開敞和封閉滾裝貨物處所側壁板、端壁或艙壁上的永久性開口的位置，應使發生在貨物處所的火災不致威脅積載區域和救生艇的登乘站及起居處所、服務處所、上層結構中的控制站和特種處所之上的甲板室。

**2 封閉滾裝貨物處所**

封閉滾裝貨物處所應符合第 38 條的要求，該條第 4 款除外。

**3 開敞滾裝貨物處所**

開敞滾裝貨物處所應符合第 37.1.3、37.2.1、38.1（除不允許使用取樣探煙系統外）和第 38.2.3 條的要求。”

## C 部分－貨船消防安全措施

### 第 49 條－可燃材料的限制使用

47 現有第 2 款由以下文字代替：

“2 用於外露的內部表面的油漆、清漆和其他表面塗料不應產生過量的煙和毒性物，此係根據《耐火試驗程序規則》確定。”

48 現有第 3 款由以下文字代替：

“3 如果在起居處所、服務處所及控制站內採用甲板基層敷料，這些敷料應為在高溫時不易着火或產生毒性或爆炸性危險物的經認可的材料，此係根據《耐火試驗程序規則》確定。”

### 第 50 條－構造細節

49 現有第 3.1 款由以下文字代替：

“3.1 除在裝貨處所或服務處所的冷藏庫內以外，隔熱材料應是不燃的。用於冷卻系統的與隔熱物一併使用的防潮層和黏合劑及管系裝置的隔熱物，毋須用不燃材料，但應保持在實際可行的最低數量，並且它們的外露表面應具有低播焰性。”

### 第 53 條－貨物處所內的防火裝置

50 現有第 1.2 款和 1.3 款由以下文字代替：

“1.2 儘管有第 1.1 款的規定，從事在甲板上或貨物處所載運危險貨物的船舶的任何貨物處所內都應設置符合第 5 條規定

的固定式氣體滅火系統或主管機關認為能對所載貨物起同等保護作用的滅火系統。

1.3 任何專門為裝運礦、煤、穀物、未乾燥的木材、不燃貨物或主管機關認為失火危險小的貨物而建造的船舶，主管機關可對其貨物處所免除上述第 1.1 和 1.2 款的要求。這種免除只在船舶裝設有鋼質艙口蓋和具有能關閉所有通風導管和其他通向貨物處所的開口的有效設施時方可允許。在允許這種免除時，主管機關應根據第 I/12（a）（vi）條發給一份《免除證書》，無論有關船舶為何時建造，並應確保《免除證書》後面附有船舶允許載運的貨物清單。”

51 新增如下第 2.5 款：

“2.5 位於封閉滾裝貨物處所側壁板、端壁或開敞和艙壁上的永久性開口的位置，應使發生在貨物處所的火災不致威脅積載區域和救生艇筏的登乘站及起居處所、服務處所、上層結構中的控制站和貨物處所之上的甲板室。”

**第 54 條－載運危險貨物船舶的特殊要求**

52 新增如下第 2.4.3 款：

“2.4.3 在沒有機械通風的情況下，用於裝運散裝固體危險貨物的封閉貨物處所，應有自然通風。”

53 新增如下第 2.10 和 2.11 款：

“2.10 在有滾裝貨物處所的船舶上，應在封閉滾裝貨物處所和相鄰的開敞滾裝貨物處所之間加以分隔。該分隔應使這些

處所間危險蒸汽和液體的通路減至最小。如果認為滾裝貨物處所在其整個長度上為封閉處所，則不必進行分隔，但應完全符合本條的有關特殊要求。

2.11 在有滾裝貨物處所的船舶上，應在封閉滾裝貨物處所和相鄰的露天甲板之間加以分隔。該分隔應使這些處所間危險蒸汽和液體的通路減至最小。如果封閉滾裝貨物處所的佈置符合對在相鄰露天甲板上載運的危險貨物的要求，則不必進行分隔。”

**表 54.1－要求對於船舶和貨物處所中危險貨物不同載運方式的適用**

54 現有的表 54.1 由下表代替：

*"表 54.1 中凡出現 X 時，則其表示這一要求適用於表 54.3 相應行中所列的所有類別的危險貨物，有註釋標示者除外。*

| 第 54.1.2 條<br>第 54.2 條 | *包括 .1 到 .5 的露天甲板* | .1<br>*非特別設計的* | .2<br>*集裝箱貨物處所* | .3 | | .4<br>*散裝固體危險貨物* | .5<br>*船載駁船* |
|---|---|---|---|---|---|---|---|
| | | | | *封閉滾裝貨物處所*[5] | *開敞滾裝貨物處所* | | |
| .1.1 | X | X | X | X | X | 關於不同級別的危險貨物適用第 54 條的要求，見表 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 | 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 | | - |

註：

1 對於 4 類和 5.1 類，不適用於封閉貨物集裝箱。
對於裝載在封閉貨物集裝箱內的 2 類、3 類、6.1 和 8 類，其通風率可以減至不少於換氣 2 次。就此要求而言，一個可移動式罐櫃是一個封閉貨物集裝箱。

2 僅適用於甲板。

3 僅適用於不能密封的封閉滾裝貨物處所。

4 在駁船能夠容納可燃蒸汽或它們能夠通過與駁船相連接的通風管道將可燃蒸汽排到載駁船的艙室以外的安全處所的特殊情況下，經主管機關同意可以降低或取消這些要求。

5 在載運危險貨物時，特種處所應按封閉滾裝貨物處所對待。”

**表 54.2－要求對於載運散裝固體危險貨物的船舶和貨物處所危險貨物不同類別的適用**

55 現有的表 54.2 由下表代替：

“

| 類別 | 4.1 | 4.2 | 4.3[6] | 5.1 | 6.1 | 8 | 9 |
|---|---|---|---|---|---|---|---|
| 條序 | | | | | | | |
| 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[7,9] | - | - | 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] |

註：

6 可以散貨形式運輸的此類危險貨物除需滿足本表所列的要求外，主管機關必須對有關船舶的構造和設備予以特殊考慮。

7 僅適用於含有溶劑萃取物的種子餅、硝酸氨和硝酸氨化肥。

8 僅適用於硝酸氨和硝酸氨化肥。但是，依照國際電工技術委員會的出版物 79 號－《爆炸性氣體環境的電氣設備》所列標準的保護程度是足夠的。

9 只需要合適的金屬網保護。

10 經修正的以第 A.434（XI）號決議通過的《固體散貨安全操作規則》的要求是足夠的。”

**表 54.3－要求對於除散裝固體危險貨物外的危險貨物不同類別的適用**

56 現有的表 54.3 由下表代替：

“

| 類別 | 1.1-1.6 | 1.4S | 2.1 | 2.2 | 2.3 | 3.1 3.2 | 3.3 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 6.1 液體 | 6.1 液體 ≤23°C | 6.1 液體 >23°C ≤61°C | 6.1 固體 | 8 液體 | 8 液體 ≤23°C | 8 液體 >23°C ≤61°C | 8 固體 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 條序 | | | | | | | | | | | | | | | | | | | | | |
| 54.2.1.1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 54.2.1.2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | – |
| 54.2.1.3 | X | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 54.2.1.4 | X | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| 54.2.2 | X | – | X | – | – | X | – | – | – | – | – | – | – | X | – | – | – | X | – | – | – |
| 54.2.3 | X | X | X | X | X | X | X | X | X | X | X | – | X | X | X | X | X | X | X | X | – |
| 54.2.4.1 | – | – | X | – | X | X | – | X[11] | X[11] | X | X[11] | – | – | X | X | X[11] | – | X | X | – | X[11] |
| 54.2.4.2 | – | – | X | – | – | X | – | – | – | – | – | – | – | X | X | – | – | X | X | – | – |
| 54.2.5 | – | – | – | – | – | X | – | – | – | – | – | – | X | X | X | – | – | X | – | – | – |
| 54.2.6 | – | – | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X[14] |
| 54.2.7 | – | – | – | – | – | X | X | X | X | X | X | – | – | X | X | – | – | X | X | – | – |
| 54.2.8 | X[12] | – | X | X | X | X | X | X | X | X | X[13] | – | – | X | X | – | – | X | X | – | – |
| 54.2.9 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

註：

11 在經修正的《國際海運危險貨物規則》要求“機械通風處所”時。

12 在所有情況下，於距機器處所限界的水平距離為 3 米處積載。

13 參閱《國際海運危險貨物規則》。

14 視所載運的貨物而定。”

## D 部分－液貨船消防安全措施

### 第 56 條－各處所的位置和分隔

57 標題下面的句子由以下文字代替：

“（除第 9 款適用於 1998 年 7 月 1 日或以後建造的船舶外，本條適用於 1992 年 2 月 1 日或以後建造的船舶）。”

58 現有第 7 條由以下文字代替：

“7 圍繞起居處所的上層建築和甲板室的外部限界和包括支撐這些起居處所的任何懸伸甲板，應使用鋼材建造，且其面向貨物區域的所有部分及距面向貨物區域的端部限界 3 米的外部側面上的所有部分，應隔熱至“A-60”級標準。對於這種上層建築和甲板室的各個側面，此種隔熱物應達到主管機關的認為必要的高度。”

59 現有第 8.3 款的第二句由以下文字代替：

“此種窗和舷窗，除操舵室的窗子以外，應按“A-60”級標準建造。”

60 新增如下第 9 款：

“9 對於適用於本條的所有船舶，如果從管隧到主泵艙有永久性通道，應安裝符合第 II-1/25-9.2 條要求的水密門，並且：

.1 除能從駕駛室操作外，該水密門應能從主泵艙入口外側手動關閉；和

.2 在船舶正常操作期間，水密門應保持關閉，需要進入管隧時方能打開。”

**第 59 條 — 透氣、驅氣、除氣和通風**

61 新增如下第 1.2.3 款：

“.3 如果第 1.2.2 款提到的裝置發生故障時，應有第二種裝置允許蒸汽、空氣或惰性氣體混合物充分流動釋放，避免超壓或負壓。作為代替，也可以在每個由第 1.2.2 款要求的裝置所保護的液艙內安裝壓力傳感器，將其監視系統設在船舶的貨物控制室或通常進行貨物作業的地方。該監視設備還應帶有報警裝置，在探測到艙內出現超壓或負壓時啟動。”

62 現有第 1.3.2 款由以下文字代替：

“1.3.2 如該裝置與其他液貨艙連在一起，則應裝有截止閥或其他可接受的裝置，以隔絕每一液貨艙。若安裝截止閥，應為其配備鎖閉裝置，由負責的高級船員控制。截止閥或其他可接受的裝置的工作狀況應有清楚的可視指示。若液貨艙已被隔離，應確保有關隔離閥在這些液貨艙開始進行裝貨或壓載或卸載之前被打開。任何隔離措施都必須按第 1.2.1 款的規定繼續允許由於液貨艙內溫度變化而引起的氣體流動。”

63 新增如下第 1.3.3 款：

“1.3.3 如果一個或一組與普通通風系統隔離的液貨艙要進行裝載和壓載或卸載，該液貨艙或該組液貨艙應按第 1.2.3 款的要求安裝超壓或負壓保護裝置。”

64 新增如下第 1.11 款：

“1.11 1998 年 7 月 1 日以前建造的船舶在 1998 年 7 月 1 日以後的第一次定期塢修時應符合第 1.2.3 和 1.3.3 款的要求，但不得晚於 2001 年 7 月 1 日。”

65 新增如下第 5 款：

**“5 可燃氣體指示器**

所有液貨船都應至少備有一個用於測量可燃蒸氣密度的便攜儀器和充分的系列備件。應為這些儀器提供適當的校準裝置。”

**第 62 條—惰性氣體系統**

66 在第 11.2.1 款結尾增加下面一句話：

“使用的控制系統應明確地指示出此種閥的工作狀況。”

## 第 V 章

## 航行安全

67 刪去現有第 15-1 條。

## 第 VII 章

## 危險貨物的裝運

**第 2 條 — 分類**

68 “第 6.1 類 — 有毒（毒性）物質”由以下文字代替：

“第 6.1 類 — 毒性物質。”

69 第 9 類現有條文中“雜類危險物質，即”由以下文字代替：

“雜類危險物質和物品，即”

**第 7 條 — 客船上的爆炸品**

70 新增如下第 1.5 款：

“.5 只有在每艘客船上相容類 N 物品總淨重不超過 50 公斤，且除相容類 S 的 1.4 分類以外無其他爆炸品時，才允許載運。”

**RESOLUTION MSC.57(67)**
**(adopted on 5 December 1996)**

**ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974**

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-seventh 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 1998, 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 1998 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, 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 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

## CHAPTER II-1

## CONSTRUCTION - SUBDIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS

## PART A-1 - STRUCTURE OF SHIPS

1 The following new regulations 3-3 and 3-4 are added to part A-1 of chapter II-1:

**"Regulation 3-3**
**Safe access to tanker bows**

1 For the purpose of this regulation and regulation 3-4, tankers include oil tankers as defined in regulation 2.12, chemical tankers as defined in regulation VII/8.2 and gas carriers as defined in regulation VII/11.2.

2 Every tanker constructed on or after 1 July 1998 shall be provided with the means to enable the crew to gain safe access to the bow even in severe weather conditions. For tankers constructed before 1 July 1998, such means of access shall be provided at the first scheduled dry-docking after 1 July 1998, but not later than 1 July 2001. Such means of access shall be approved by the Administration based on the guidelines developed by the Organization.

**Regulation 3-4**
**Emergency towing arrangements on tankers**

Emergency towing arrangements shall be fitted at both ends on board every tanker of not less than 20,000 tonnes deadweight, constructed on or after 1 January 1996. For tankers constructed before 1 January 1996, such an arrangement shall be fitted at the first scheduled dry-docking after 1 January 1996 but not later than 1 January 1999. The design and construction of the towing arrangements shall be approved by the Administration, based on the guidelines developed by the Organization."

## PART B - SUBDIVISION AND STABILITY

2 The following new regulation 17-1 is added after existing regulation 17:

**"Regulation 17-1**

**Openings in the shell plating below the bulkhead deck of passenger ships and the freeboard deck of cargo ships**

Notwithstanding the requirements of regulation 17, ships constructed on or after 1 July 1998 shall comply with the requirements of regulation 17 where a reference to "margin line" shall be deemed to mean a reference to the bulkhead deck of passenger ships and the freeboard deck of cargo ships."

## PART C - MACHINERY INSTALLATIONS

**Regulation 26 - General**

3 The following new paragraphs 9, 10 and 11 are added after existing paragraph 8:

"9 Non-metallic expansion joints in piping systems, if located in a system which penetrates the ship's side and both the penetration and the non-metallic expansion joint are located below the deepest load waterline, shall be inspected as part of the surveys prescribed in regulation I/10(a) and replaced as necessary, or at an interval recommended by the manufacturer.

10 Operating and maintenance instructions and engineering drawings for ship machinery and equipment essential to the safe operation of the ship shall be written in a language understandable by those officers and crew members who are required to understand such information in the performance of their duties.

11 Location and arrangement of vent pipes for fuel oil service, settling and lubrication oil tanks shall be such that in the event of a broken vent pipe this shall not directly lead to the risk of ingress of seawater splashes or rainwater. Two fuel oil service tanks for each type of fuel used on board necessary for propulsion and vital systems or equivalent arrangements shall be provided on each new ship, with a capacity of at least 8 h at maximum continuous rating of the propulsion plant and normal operating load at sea of the generator plant. This paragraph applies only to ships constructed on or after 1 July 1998."

**Regulation 31 - Machinery controls**

4 The following new paragraph 5 is added after existing paragraph 4:

"5 Ships constructed on or after 1 July 1998 shall comply with the requirements of paragraphs 1 to 4, as amended, as follows:

.1 paragraph 1 is replaced by the following:

"1 Main and auxiliary machinery essential for the propulsion, control and safety of the ship shall be provided with effective means for its operation and control. All control systems essential for the propulsion, control and safety of the ship shall be independent or designed such that failure of one system does not degrade the performance of another system.";

.2 in the second and third lines of paragraph 2, the words "and the machinery spaces are intended to be manned" are deleted;

.3 the first sentence of paragraph 2.2 is replaced by the following:

".2 the control shall be performed by a single control device for each independent propeller, with automatic performance of all associated services, including, where necessary, means of preventing overload of the propulsion machinery.";

.4 paragraph 2.4 is replaced by the following:

".4 propulsion machinery orders from the navigation bridge shall be indicated in the main machinery control room and at the manoeuvring platform;";

.5 a new sentence is added at the end of paragraph 2.6 to read as follows:

"It shall also be possible to control the auxiliary machinery, essential for the propulsion and safety of the ship, at or near the machinery concerned"; and

.6 paragraphs 2.8, 2.8.1 and 2.8.2 are replaced by the following:

".8 indicators shall be fitted on the navigation bridge, the main machinery control room and at the manoeuvring platform, for:

.8.1 propeller speed and direction of rotation in the case of fixed pitch propellers; and

.8.2 propeller speed and pitch position in the case of controllable pitch propellers;".

## PART D - ELECTRICAL INSTALLATIONS

**Regulation 41 - Main source of electrical power and lighting systems**

5 The following new paragraph 5 is added after existing paragraph 4:

"5 Ships constructed on or after 1 July 1998:

.1 in addition to paragraphs 1 to 3, shall comply with the following:

.1.1 where the main source of electrical power is necessary for propulsion and steering of the ship, the system shall be so arranged that the electrical supply to equipment necessary for propulsion and steering and to ensure safety of the ship will be maintained or immediately restored in the case of loss of any one of the generators in service;

.1.2 load shedding or other equivalent arrangements shall be provided to protect the generators required by this regulation against sustained overload;

.1.3 where the main source of electrical power is necessary for propulsion of the ship, the main busbar shall be subdivided into at least two parts which shall normally be connected by circuit breakers or other approved means; so far as is practicable, the connection of generating sets and other duplicated equipment shall be equally divided between the parts; and

.2 need not comply with paragraph 4."

**Regulation 42 - Emergency source of electrical power in passenger ships**

6 The following new paragraph 3.4 is added after existing paragraph 3.3:

"3.4 For ships constructed on or after 1 July 1998, where electrical power is necessary to restore propulsion, the capacity shall be sufficient to restore propulsion to the ship in conjunction with other machinery, as appropriate, from a dead ship condition within 30 min after blackout."

**Regulation 43 - Emergency source of electrical power in cargo ships**

7 The following new paragraph 3.4 is added after existing paragraph 3.3:

"3.4 For ships constructed on or after 1 July 1998, where electrical power is necessary to restore propulsion, the capacity shall be sufficient to restore propulsion to the ship in conjunction with other machinery, as appropriate, from a dead ship condition within 30 min after blackout."

## CHAPTER II-2

## CONSTRUCTION - FIRE PROTECTION, FIRE DETECTION AND FIRE EXTINCTION

## PART A - GENERAL

### Regulation 1 - Application

8 Existing paragraph 1.1 is replaced by the following:

"1.1 Unless expressly provided otherwise, this chapter shall apply to ships the keels of which are laid or which are at a similar stage of construction on or after 1 July 1998."

9 Existing paragraph 1.3.2 is replaced by the following:

".2 the expression *all ships* means ships constructed before, on or after 1 July 1998".

10 Existing paragraph 2 is replaced by the following:

"2 Unless expressly provided otherwise, for ships constructed before 1 July 1998 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) and MSC.31(63), are complied with."

11 In paragraph 3.1, the expression "1 July 1986" is replaced by "1 July 1998".

### Regulation 3 - Definitions

12 Existing paragraph 1 is replaced by the following:

"1 *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. Any other material is a combustible material."

13 Existing paragraph 2 is replaced by the following:

"2 *A standard fire test* is one in which the specimens of the relevant bulkheads and decks are exposed in a test furnace to temperatures corresponding approximately to the standard time-temperature curve. The test methods shall be in accordance with the Fire Test Procedures Code."

14 In paragraph 3.4, "139°C" is replaced by "140°C".

15 Existing paragraph 3.5 is replaced by the following:

".5 the Administration shall require 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."

16 In paragraph 4.2, "139°C" is replaced by "140°C".

17 Existing paragraph 4.4 is replaced by the following:

".4 the Administration shall require 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."

18 Existing paragraph 8 is replaced by the following:

"8 *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."

19 Existing paragraph 22-1 is replaced by the following:

"22-1 *Central control station* is a control station in which the following control and indicator functions are centralized:

.1 fixed fire detection and alarm systems;
.2 automatic sprinklers, fire detection and alarm systems;
.3 fire door indicator panels;
.4 fire door closures;
.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."

20 Existing paragraph 23.3 is replaced by the following:

".3 all draperies, curtains and other suspended textile materials have qualities of resistance to the propagation of flame not inferior to those of wool of mass 0.8 kg/m$^2$, this being determined in accordance with the Fire Test Procedures Code."

21 Existing paragraph 23.4 is replaced by the following:

".4 all floor coverings have low flame spread characteristics."

22 Existing paragraph 23.6 is replaced by the following:

".6 all upholstered furniture has qualities of resistance to the ignition and propagation of flame, this being determined in accordance with the Fire Test Procedures Code."

23 The following new paragraph 23.7 is added:

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

24 The following new paragraph 34 is added:

"34 *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."

**Regulation 12 - Automatic sprinkler, fire detection and fire alarm systems**

25 Existing paragraph 1.2 is replaced by the following:

"1.2 Each section of sprinklers shall include means for giving a visual and audible alarm signal automatically at one or more indicating units whenever any sprinkler comes into operation. Such alarm systems shall be such as to indicate if any fault occurs in the system. Such units shall indicate in which section served by the system fire has occurred and shall be centralized on the navigation bridge and in addition, visible and audible alarms from the unit shall be located in a position other than on the navigation bridge, so as to ensure that the indication of fire is immediately received by the crew."

26 Existing paragraphs 1.2.1 and 1.2.2 are deleted.

**Regulation 16 - Ventilation systems in ships other than passenger ships carrying more than 36 passengers**

27 Existing text of paragraph 1.1 is replaced by the following:

".1 these ducts shall be of a material which has low flame spread characteristics."

28 The following new paragraph 11 is added:

"11 The following arrangements shall be tested in accordance with the Fire Test Procedures Code:

.1 fire dampers, including relevant means of operation; and

.2 duct penetrations through "A" class divisions. Where steel sleeves are directly joined to ventilation ducts by means of rivetted or screwed flanges or by welding, the test is not required."

**Regulation 17 - Fireman's outfit**

29 At the end of paragraph 3.1.1 the following sentence is added:

"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 26.2.2(6), (7), (8) or (12), no additional fireman's outfits are required."

**Regulation 18 - Miscellaneous items**

30 In the parenthesis below the title of the regulation, the words "and 8" in the first sentence are deleted and the following sentence is added:

"Paragraph 8 of this regulation applies to ships constructed on or after 1 July 1998."

31 Existing paragraph 8 is replaced by the following:

"8 Provisions for helicopter facilities shall be in accordance with the standards developed by the Organization."

**PART B - FIRE SAFETY MEASURES FOR PASSENGER SHIPS**

**Regulation 24 - Main vertical zones and horizontal zones**

32 The third sentence of existing paragraph 1.1 is replaced by the following:

"Where a category 26.2.2(5), (9) or (10) space is on one side or where fuel oil tanks are on both sides of the division, the standard may be reduced to A-0."

**Regulation 26 - Fire integrity of bulkheads and decks in ships carrying more than 36 passengers**

33 The words "26.1 to 26.4" in paragraph 1 are replaced by "26.1 and 26.2" and the superscript "d" is added in the fourth row under columns 6, 7, 8 and 9 of table 26.1 and the following note is added to table 26.1:

"[d] Where spaces of category 6, 7, 8 and 9 are located completely within the outer perimeter of the muster 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 muster station."

**Regulation 28 - Means of escape**

34 At the end of paragraph 1.10, "." is replaced by "; and".

35 The following new subparagraph .11 is added:

".11 In all passenger ships carrying more than 36 passengers, the requirements of 1.10 and regulation 41-2.4.7 shall also apply to the crew accommodation areas."

**Regulation 30 - Openings in "A" class divisions**

36 Existing paragraph 4 is replaced by the following:

"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 against 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 fire doors shall be of no more than 0.2 m/s and no less than 0.1 m/s with the ship in the upright position;

.3 the doors 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 at both sides of the door by local control. After such local opening, the door shall automatically close again;

.6 indication shall be provided at the fire door indicator panel in the continuously manned central control station whether each of the remote-released doors are 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 main source of electric power;

.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 main source of electric power at least ten times (fully opened and closed) using the local controls;

.9 disruption of the control system or main source of electric power 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 for at least 5 s but no more than 10 s after the door is released from the central control station and before the door begins to move and continue 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 to their fire integrity shall have a latch that is automatically activated by the operation of the doors when released by the control 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 .3 and .10;

.14 the components of the local control system shall be accessible for maintenance and adjusting; and

.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, this being determined 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."

37 The second sentence of existing paragraph 6 is replaced by the following:

"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 muster station areas, external stairs and open decks used for escape routes. Stairway enclosure doors need not meet this requirement."

**Regulation 32 - Ventilation systems**

38 Existing paragraph 1.1 is replaced by the following:

"1.1 The ventilation system of a passenger ship carrying more than 36 passengers shall, in addition to this part of this regulation, also be in compliance with the requirements of regulations 16.2 to 16.6, 16.8, 16.9 and 16.11."

39 Existing paragraph 1.4.3.1 is replaced by the following:

".3.1 the duct is constructed of a material which has low flame spread characteristics;"

**Regulation 34 - Restricted use of combustible materials**

40 Existing paragraph 2 is replaced by the following:

"2 Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings, for cold service systems need not be non-combustible, but they shall be kept to the minimum quantity practicable and their exposed surfaces shall have low flame spread characteristics."

41 Existing paragraph 7 is replaced by the following:

"7 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."

42 Existing paragraph 8 is replaced by the following:

"8 Primary deck coverings, if applied within accommodation and service spaces and control stations, shall be of an approved material which will not readily ignite or give rise to toxic or explosive hazards at elevated temperatures, this being determined in accordance with the Fire Test Procedures Code."

**Regulation 37 - Protection of special category spaces**

43 In paragraph 1.2.1, the following third sentence is added:

"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."

44 The following new paragraph 4 is added:

**"4 Permanent openings for ventilation**

Permanent openings in the side plating, the ends or deckhead of special category spaces shall be so situated that a fire in the special category space does not endanger stowage areas and embarkation stations for survival craft and accommodation spaces, service spaces and control stations in superstructures and deckhouses above the special category spaces."

**Regulation 38 - Protection of cargo spaces, other than special category spaces, intended for the carriage of motor vehicles with fuel in their tanks for their own propulsion**

45 The following new paragraphs 5 and 6 are added:

**"5 Permanent openings for ventilation**

Permanent openings in the side plating, the ends or deckhead of cargo spaces shall be so situated that a fire in the cargo space does not endanger stowage areas and embarkation stations for survival craft and accommodation spaces, service spaces and control stations in superstructures and deckhouses above the cargo spaces.

**6 Structural protection**

For ro-ro cargo spaces of ships constructed on or after 1 July 1998, the requirements of paragraphs 1.1,1.2 and 1.3 of regulation 38-1 shall be complied with."

46 The following new regulation 38-1 is added:

**"Regulation 38-1**

**Protection of closed and open ro-ro cargo spaces, other than special category spaces and ro-ro cargo spaces intended for the carriage of motor vehicles with fuel in their tanks**

**1 General**

1.1 The basic principles underlying regulation 37.1.1 also apply to this regulation.

1.2 In passenger ships carrying more than 36 passengers, the boundary bulkheads and decks of closed and open ro-ro cargo spaces shall be insulated to "A-60" class standard. However, where a category 26.2.2(5), (9) or (10) space is on one side of the division, the standard may be reduced to "A-0". Where fuel oil tanks are below a ro-ro cargo space, the integrity of the deck between such spaces may be reduced to "A-0" standard.

1.3 In passenger ships carrying not more than 36 passengers the boundary bulkheads and decks of closed and open ro-ro cargo spaces shall have a fire integrity as required for category (8) spaces in table 27.1 and the horizontal boundaries as required for category (8) spaces in table 27.2.

1.4 Permanent openings in the side plating, the ends or deckhead of open and closed ro-ro cargo spaces shall be so situated that a fire in the cargo space does not endanger stowage areas and embarkation stations for survival craft and accommodation spaces, service spaces and control stations in superstructures and deckhouses above the cargo spaces.

**2 Closed ro-ro cargo spaces**

Closed ro-ro cargo spaces shall comply with the requirements of regulation 38, except for paragraph 4 of that regulation.

**3 Open ro-ro cargo spaces**

Open ro-ro cargo spaces shall comply with the requirements of regulations 37.1.3, 37.2.1, 38.1, except that a sample extraction smoke detection system is not permitted, and 38.2.3."

## PART C - FIRE SAFETY MEASURES FOR CARGO SHIPS

**Regulation 49 - Restricted use of combustible materials**

47 Existing paragraph 2 is replaced by the following:

"2 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."

48 Existing paragraph 3 is replaced by the following:

"3 Primary deck coverings, if applied within accommodation and service spaces and control stations, shall be of approved material which will not readily ignite, or give rise to toxic or explosive hazards at elevated temperatures, this being determined in accordance with the Fire Test Procedures Code."

**Regulation 50 - Details of construction**

49 Existing paragraph 3.1 is replaced by the following:

"3.1 Except in cargo spaces or refrigerated compartments of service spaces, insulating materials shall be non-combustible. 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."

**Regulation 53 - Fire protection arrangements in cargo spaces**

50 Existing paragraphs 1.2 and 1.3 are replaced by the following:

"1.2 Notwithstanding the provisions of paragraph 1.1, any cargo space in a ship engaged in the carriage of dangerous goods on deck or in cargo spaces shall be provided with a fixed gas fire-extinguishing system complying with the provisions of regulation 5 or with a fire-extinguishing system which, in the opinion of the Administration, gives equivalent protection for the cargoes carried.

1.3 The Administration may exempt from the requirements of paragraphs 1.1 and 1.2 cargo spaces of any 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 all 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."

51 The following new paragraph 2.5 is added:

"2.5 Permanent openings in the side plating, the ends or deckhead of open and closed ro-ro cargo spaces shall be so situated that a fire in the cargo space does not endanger stowage areas and embarkation stations for survival craft and accommodation spaces, service spaces and control stations in superstructures and deckhouses above the cargo spaces."

**Regulation 54 - Special requirements for ships carrying dangerous goods**

52 The following new paragraph 2.4.3 is added:

"2.4.3 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."

53 The following new paragraphs 2.10 and 2.11 are added:

"2.10 In ships having ro-ro cargo spaces, a separation shall be provided between a closed ro-ro cargo space and an adjacent open ro-ro cargo 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 cargo 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.

2.11 In ships having ro-ro cargo spaces, a separation shall be provided between a closed ro-ro cargo 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 cargo spaces are in accordance with those required for the dangerous goods carried on the adjacent weather deck."

**Table 54.1 - Application of the requirements to different modes of carriage of dangerous goods in ships and cargo spaces**

54 Existing table 54.1 is replaced by the following:

*"Wherever X appears in table 54.1 it means that this requirement is applicable to all classes of dangerous goods as given in the appropriate line of table 54.3, except as indicated by the notes.*

| Regulation 54.1.2 / Regulation 54.2 | *Weather decks .1 to .5 inclusive* | .1 *Not specifically designed* | .2 *Container cargo spaces* | .3 *Closed ro-ro cargo spaces*[5] | .3 *Open ro-ro cargo spaces* | .4 *Solid dangerous goods in bulk* | .5 *Shipborne barges* |
|---|---|---|---|---|---|---|---|
| .1.1 | X | X | X | X | X | For application of requirements of regulation 54 to different classes of dangerous goods, see table 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 | 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 | | - |

*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 cargo 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 cargo spaces when dangerous goods are carried."

**Table 54.2 - Application of the requirements to different classes of dangerous goods for ships and cargo spaces carrying solid dangerous goods in bulk**

55 Existing table 54.2 is replaced by the following:

"

| Class | 4.1 | 4.2 | 4.3[6] | 5.1 | 6.1 | 8 | 9 |
|---|---|---|---|---|---|---|---|
| Regulation | | | | | | | |
| 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[7,9] | - | - | 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] |

*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 79 - 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."

**Table 54.3 - Application of the requirements to different classes of dangerous goods except solid dangerous goods in bulk**

56 Existing table 54.3 is replaced by the following:

"

| Class | 1.1-1.6 | 1.4S | 2.1 | 2.2 | 2.3 | 3.1 3.2 | 3.3 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 6.1 liquids | 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 ≤61°C | 8 solids | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Regulation | | | | | | | | | | | | | | | | | | | | | |
| 54.2.1.1 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 54.2.1.2 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | - |
| 54.2.1.3 | X | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 54.2.1.4 | X | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 54.2.2 | X | - | X | - | - | X | - | - | - | - | - | - | - | X | - | - | - | X | - | - | - |
| 54.2.3 | X | X | X | X | X | X | X | X | X | X | X | - | X | X | X | X | X | X | X | X | - |
| 54.2.4.1 | - | - | X | - | X | X | - | X[11] | X[11] | X | X[11] | - | - | X | X | X[11] | - | X | X | - | X[11] |
| 54.2.4.2 | - | - | X | - | - | X | - | - | - | - | - | - | - | X | X | - | - | X | X | - | - |
| 54.2.5 | - | - | - | - | - | X | - | - | - | - | - | - | X | X | X | - | - | X | - | - | - |
| 54.2.6 | - | - | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X[14] |
| 54.2.7 | - | - | - | - | - | X | X | X | X | X | X | - | - | X | X | - | - | X | X | - | - |
| 54.2.8 | X[12] | - | X | X | X | X | X | X | X | X | X[13] | - | - | X | X | - | - | X | X | - | - |
| 54.2.9 | X | 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.

14 As appropriate to the goods being carried."

## PART D - FIRE SAFETY MEASURES FOR TANKERS

**Regulation 56 - Location and separation of spaces**

57 The sentence below the title is replaced by the following:

"(This regulation applies to ships constructed on or after 1 February 1992, except that paragraph 9 applies to ships constructed on or after 1 July 1998)."

58 Existing paragraph 7 is replaced by the following:

"7 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. In the case of the sides of those superstructures and deckhouses, such insulation shall be carried as high as is deemed necessary by the Administration."

59 The second sentence in existing paragraph 8.3 is replaced by the following:

"Such windows and sidescuttles, except wheelhouse windows, shall be constructed to "A-60" class standard."

60 The following new paragraph 9 is added:

"9 On every ship to which this regulation applies, 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 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."

**Regulation 59 - Venting, purging, gas-freeing and ventilation**

61 The following new paragraph 1.2.3 is added:

".3 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 1.2.2. Alternatively, pressure sensors may be fitted in each tank protected by the arrangement required in 1.2.2, 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."

62 Existing paragraph 1.3.2 is replaced by the following:

"1.3.2 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 paragraph 1.2.1."

63 The following new paragraph 1.3.3 is added:

"1.3.3 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 paragraph 1.2.3"

64 The following new paragraph 1.11 is added:

"1.11 Ships constructed before 1 July 1998 shall comply with the requirements of paragraphs 1.2.3 and 1.3.3 by the date of the first scheduled dry-docking after 1 July 1998, but not later than 1 July 2001."

65 The following new paragraph 5 is added:

**"5 Combustible gas indicators**

All 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."

**Regulation 62 - Inert gas systems**

66 In paragraph 11.2.1, the following sentence is added at the end:

"The control system operated shall provide positive indication of the operational status of such valves."

## CHAPTER V

## SAFETY OF NAVIGATION

67 Existing regulation 15-1 is deleted.

## CHAPTER VII

## CARRIAGE OF DANGEROUS GOODS

**Regulation 2 - Classification**

68 "Class 6.1 - Poisonous (toxic) substances" is replaced by the following:

"Class 6.1 - Toxic substances".

69 The words "Miscellaneous dangerous substances, that is" in the existing text for Class 9 are replaced by the following:

"Miscellaneous dangerous substances and articles, i.e."

**Regulation 7 - Explosives in passenger ships**

70 The following new paragraph 1.5 is added:

".5 articles in compatibility group N shall only be allowed in passenger ships if the total net explosive mass does not exceed 50 kg per ship and no other explosives, apart from division 1.4 compatibility group S, are carried."