第 28/2025 號行政長官公告

國際海事組織海上安全委員會於二零一五年六月十一日透過第MSC.397（95）號決議通過了《海員培訓、發證和值班規則》（《培訓規則》）A部分的修正案，該修正案已於二零一七年一月一日在國際法律秩序上生效，包括對澳門特別行政區生效；

基於此，行政長官根據第3/1999號法律《法規的公佈與格式》第五條（一）項和第六條第一款的規定，命令公佈國際海事組織海上安全委員會透過第MSC.397（95）號決議通過的上指修正案的中文和英文正式文本。

二零二五年十二月二十六日發佈。

行政長官　岑浩輝

Aviso do Chefe do Executivo n.º 28/2025

Considerando que, em 11 de Junho de 2015, o Comité de Segurança Marítima da Organização Marítima Internacional (OMI), através da resolução MSC.397(95), adoptou emendas à Parte A do Código de Formação, de Certificação e de Serviço de Quartos para os Marítimos (Código STCW), e que tais emendas entraram em vigor na ordem jurídica internacional, incluindo a Região Administrativa Especial de Macau, em 1 de Janeiro de 2017;

O Chefe do Executivo manda publicar, nos termos da alínea 1) do artigo 5.º e do n.º 1 do artigo 6.º da Lei n.º 3/1999 (Publicação e formulário dos diplomas), as referidas emendas adoptadas pelo Comité de Segurança Marítima da OMI através da resolução MSC.397(95), nos seus textos autênticos em línguas chinesa e inglesa.

Promulgado em 26 de Dezembro de 2025.

O Chefe do Executivo, *Sam Hou Fai.*

第 MSC.397（95）號決議

（2015 年 6 月 11 日通過）

《海員培訓、發證和值班規則》A 部分的修正案

海上安全委員會，

憶及《國際海事組織公約》關於本委員會職能的第二十八條第（二）款，

進一步憶及《1978 年海員培訓、發證和值班標準國際公約》（本公約）第 XII 條及第 I/1.2.3 條關於《海員培訓、發證和值班規則》A 部分修正程序的規定，

在其第 95 屆會議上，審議了按照本公約第 XII（1）（a）（i）條提出和散發的《培訓規則》A 部分的修正案，

1 按照本公約第 XII（1）（a）（iv）條，通過《培訓規則》的修正案，其文本載於本決議附件；

2 按照本公約第 XII（1）（a）（vii）（2）條，決定上述《培訓規則》修正案須在 2016 年 7 月 1 日視為已被接受，除非在此日期之前，有三分之一以上的本公約締約國，或其商船合計噸位不少於世界 100 總登記噸或以上的商船總噸位的 50%的締約國，通知秘書長其反對該修正案；

3 請各締約國注意，按照本公約第 XII（1）（a）（ix）條，附件中《培訓規則》的修正案在按照以上第 2 段被接受後，將於 2017 年 1 月 1 日生效；

4 要求秘書長本着本公約第 XII（1）（a）（v）條，將本決議及其附件中的修正案文本的核證無誤副本發送給本公約各締約國；並

5 進一步要求秘書長將本決議及其附件的副本發送給非本公約締約國的本組織會員國。

附件

《海員培訓、發證和值班標準規則》A 部分的修正案

第 V 章－特定類型船舶人員的特殊培訓要求

1 在現有的第 A-V/2 節之後加入以下新的 A-V/3 節：

“第 A-V/3 節

受《IGF 規則》約束的船舶的船長、高級船員、普通船員及其他人員培訓和資格的強制性最低要求。

受《IGF 規則》約束船舶船舶的基本培訓

1 每位申請受《IGF 規則》約束的船舶基本培訓證書的人士須：

.1.1 根據表 A-V/3-1 所要求的職能、職責和責任，已圓滿完成規則第 V/3 條第 5 款規定的經認可的基本培訓；並且

.1.2 按表 A-V/3-1 第 3 欄和第 4 欄所列的評價適任的方法和標準，提供已達到所要求的適任標準的證據；或者

.2 已根據規則第 V/3 條第 6 款關於在液化氣船上服務的要求，進行了適當的培訓和發證。

受《IGF 規則》約束的船舶的高級培訓

2 每位申請受《IGF 規則》約束的船舶高級培訓證書的人士應：

.1.1 根據表 A-V/3-2 所要求的能力、職責和責任，已圓滿完成規則第 V/3 條第 8 款規定的經認可的高級培訓；並且

.1.2 按表 A-V/3-2 第 3 欄和第 4 欄所列的評價適任的方法和標準，提供已達到所要求的適任標準的證明；或者

.2 已根據規則第 V/3 條第 9 款關於在液化氣船上服務的要求，進行了適當的培訓和發證。

免除

3 對於客船以外的 500 總噸以下的船舶，如基於該船的尺度及航程長短或性質，主管機關認為執行本節全部要求不合理或者不可行時，在充分考慮到船上人員、船舶和財產安全及保護海洋環境的前提下，可對某一船舶或某一船級的船舶上的海員免除部分要求。

表 A-V/3-1

受《IGF 規則》約束的船舶基本培訓的最低適任標準

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
有助於受《IGF 規則》約束的船舶的安全操作	受《IGF 規則》約束的船舶的設計和操作特性 受《IGF 規則》約束的船舶，其燃料系統及燃料儲存系統基本知識： .1 《IGF 規則》關於燃料的說明 .2 受《IGF 規則》約束的燃料系統類型 .3 受《IGF 規則》約束的船舶上燃料的常壓、低溫或壓縮存儲 .4 受《IGF 規則》約束的船舶上的燃料儲存系統的總體佈置 .5 危險區和區域 .6 典型防火計劃 .7 受《IGF 規則》約束的船舶的監測、控制和安全系統 受《IGF 規則》約束的船舶燃料及燃料存儲系統操作基本知識： .1 管系及閥門 .2 常壓、低溫及壓縮存儲 .3 施放系統及防護屏蔽 .4 基本燃料加註操作及加註系統 .5 對低溫事故的防護 .6 燃料洩漏監控及探測 受《IGF 規則》約束的船舶的燃料物理性質的基本知識，包括：	考試並評估從下列一項或數項獲取的證據： .1 認可的工作經歷 .2 認可培訓船經歷 .3 認可的模擬器培訓 .4 認可的培訓計劃	職責範圍內的交流清楚、有效 與受《IGF 規則》約束的船舶相關的操作符合公認的原則和程序以確保操作安全

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
	.1 性質及特徵 .2 壓力及溫度，包括蒸氣壓力/溫度關係 受《IGF 規則》約束的船舶安全要求及安全管理的知識和理解		
受《IGF 規則》約束的船舶上採取預防措施防止危害	有關受《IGF 規則》約束的船舶操作危害的基本知識，包括： .1 健康危害 .2 環境危害 .3 反應性危害 .4 腐蝕性危害 .5 着火、爆炸及易燃性危害 .6 着火源 .7 靜電危害 .8 毒性危害 .9 蒸氣洩漏以及蒸發氣團 .10 極低溫度 .11 壓力危害 .12 燃料批次差異 危害控制的基本知識： .1 清空、惰化、乾艙和監控技術 .2 防靜電措施 .3 通風 .4 隔離 .5 貨物抑制 .6 防止點燃、火災及爆炸的措施 .7 常壓控制 .8 氣體測試 .9 對低溫傷害的防護（液化天然氣）	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	正確識別《安全數據表》（SDS）中對船舶和人員的相關傷害，並採取符合既定程序的適當行動 識別和在意識到危險局面時採取的行動符合既定程序，並與最佳做法一致

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
	受《IGF 規則》約束的船舶上《安全數據表》（SDS）中燃料特性的理解		
應用職業健康與安全預防和措施	了解氣體測量器和類似設備的功能： .1 氣體測試 專用安全設備和防護裝置的正確使用，包括： .1 呼吸器 .2 防護服 .3 復甦儀 .4 救援和逃生設備 符合與受《IGF 規則》約束的船舶相關的法規、行業指南和人員安全的安全工作做法及程序的基本知識： .1 進入危險空間或工業防爆危險區前採取的防護措施 .2 維修和保養工作進行前採取的防護措施 .3 熱工和冷工作業的安全措施 參照《安全數據表》(SDS)進行急救的基本知識	考試或評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	始終遵循旨在保護人員及船舶的程序和安全工作做法 正確使用恰當的安全和防護設備 急救注意事項

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
在受《IGF 規則》約束的船舶上執行消防操作	在《IGF 規則》約束的船舶上的消防組織及應採取的行動 在《IGF 規則》約束的船舶上與燃料系統及燃料處理相關的特殊危害 在《IGF 規則》約束的船舶上的控制和撲滅不同種類燃料引起的火災所使用的滅火劑和方法 消防系統的操作	在認可的真實培訓環境下（如模擬船上環境）進行實操訓練和指導，並在任何可能及可行的情況下，在黑暗條件下進行上述訓練	意識到情況緊急時採取的初步及後續行動符合既定做法和程序 識別集合型號後採取的行動適合信號所表明的緊急情況並符合既定程序 防護服及設備適合消防操作的性質 單個行動的時機和順序安排與當時環境及條件相適應 使用合適的程序、技能及滅火劑完成滅火任務
應急響應	應急程序的基本知識，包括緊急關閉	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	迅速識別緊急情況的類型和影響，並採取符合緊急程序和應急計劃的行動
採取預防措施，防止適用《IGF 規則》船舶燃料洩漏導致環境污染	應對受《IGF 規則》約束的船舶上燃料洩漏/溢出/氣體排放採取的措施的基本知識，包括需要： .1 向責任人報告相關信息 .2 了解船上溢出/洩漏/氣體排放的響應程序 .3 了解《IGF 規則》列明之燃料溢出/洩漏時適當的人員防護	考試或評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	始終遵循旨在保護環境的程序

表 A-V/3-2

適用《IGF 規則》船舶高級培訓的最低適任標準

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
熟悉受《IGF 規則》約束的船舶船上燃料的物理和化學性質	關於受《IGF 規則》約束的船舶安全加裝燃料和所用燃料有關的基礎化學、物理及相關定義的基本知識和理解，包括： .1 受《IGF 規則》約束的船舶所用不同燃料的化學結構 .2 受《IGF 規則》約束的船舶所用燃料的性質和特點，包括： .2.1 簡單物理定律 .2.2 物質狀態 .2.3 液體和蒸氣密度 .2.4 低溫燃料的氣化和風化 .2.5 氣體的壓縮和膨脹 .2.6 氣體的臨界壓力和溫度 .2.7 閃點、可燃上限和下限、自燃溫度 .2.8 飽和蒸氣壓/參考溫度 .2.9 露點和始沸點 .2.10 水合物的形成 .2.11 燃燒性質/發熱量 .2.12 甲烷值/爆震值 .2.13 IGF 所列燃料的污染物特徵 .3 單一液體的性質 .4 溶液的性質和特點 .5 熱力學單位 .6 熱力學基本定律和圖表 .7 材料特性 .8 低溫的影響，包括針對低溫液體燃料的脆性開裂	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	有效使用信息源，以識別《IGF 規則》所列的燃料的性質和特徵，以及其對安全、環境保護和船舶操作的影響

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
	對《安全數據表》（SDS）中的列於《IGF 規則》的燃料信息的理解		
操作與受《IGF 規則》約束的船舶的推進裝置、輪機系統以及服務和安全裝置有關的燃料控制裝置	船舶動力裝置的工作原理 船舶輔機 船舶輪機術語的知識	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	始終按照技術規範並在安全操作的限制內，操作動力裝置、輔機和設備
安全實施和監管與受《IGF 規則》約束的船舶所使用的燃料有關的所有操作的能力	受《IGF 規則》約束的船舶的設計和特性 受《IGF 規則》約束的船舶的設計、系統和設備的知識，包括： .1 不同推進引擎的燃料系統 .2 總體佈置和構造 .3 受《IGF 規則》約束的船舶的船上燃料儲存系統，包括構造和分隔材料 .4 船上的燃料裝卸設備和儀器 .4.1 燃料泵及泵系佈置 .4.2 燃料管系 .4.3 膨脹裝置 .4.4 火焰防護網 .4.5 溫度監控裝置 .4.6 燃料艙液位計量系統 .4.7 艙壓監測和控制系統 .5 低溫燃料艙溫度壓力保持 .6 燃料系統空氣控制系統（惰性氣體、氮氣），包括儲存、發生和分配系統 .7 有毒和可燃氣體探測系統 .8 燃料緊急關閉系統（ESD）	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	交流清楚、易懂 考慮船舶設計、系統和設備，以安全的方式有效執行《IGF 規則》所列燃料的在船操作，按照公認的原則和程序以及燃料的種類進行泵系操作 操作應有計劃，採取風險管理，並按公認的原則和程序進行，以確保操作安全，避免污染海洋環境

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
	燃料系統理論和特性的知識，包括受《IGF 規則》約束的船舶燃料系統泵的種類及其安全操作 .1 低壓泵 .2 高壓泵 .3 氣化器 .4 加熱器 .5 加壓單元 有關啟用及停用燃料艙的安全程序及檢查表的知識，包括： .1 惰化 .2 冷卻 .3 初步裝載 .4 壓力控制 .5 燃料加熱 .6 清空系統		
計劃、監測受《IGF 規則》約束的船舶上燃料的安全加裝、配載和固定	受《IGF 規則》約束的船舶的一般知識 使用與《IGF 規則》所列燃料的加註、存儲與繫固相關的全部船上數據的能力 在本船與終端、車輛或者加油船間進行清晰、簡明交流的能力 受《IGF 規則》約束的船舶機器、燃料及控制系統操作安全及緊急程序的知識 熟練操作受《IGF 規則》約束的船舶燃油加註系統： .1 加註程序 .2 緊急程序 .3 船-岸/船-船界面 .4 防止傾覆	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	根據現時情況確定燃料的質量及數量，並採取必要的安全糾正措施 有安全監測系統的程序以保證迅速探測到所有警報，並按照既定的程序採取行動 根據燃料轉駁手冊以及程序進行計劃和操作，以確保操作安全，避免溢出至損及污染環境 以適合相關個人的方式並根據安全工作程序分配人員工作職責並告知其應遵循的程序和工作

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
	熟練進行燃料系統測量和計算，包括： .1 最大加入量 .2 船上載有數量（OBQ） .3 最小船上餘量（ROB） .4 燃料消耗計算 無論在海上或者在港口，有能力確保和其他船上操作同時進行的燃油加註以及與《IGF 規則》所列燃料相關的其他操作進行安全管理		標準
採取預防措施防止受《IGF 規則》約束的船舶燃料泄露造成環境污染	污染對人類以及環境的影響的知識 發生溢出/泄露/排氣時所應採取措施的知識	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	始終遵循旨在保護環境的程序

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
監督和控制立法要求的遵守情況	關於經修訂的《國際防止船舶造成污染公約》（MARPOL）的相關規定和其他普遍採用的相關 IMO 文件、行業指南和港口規則的知識和理解 熟練運用《IGF 規則》及相關文件	評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓	適用《IGF 規則》船舶上的燃料作業操作符合國際海事組織的相關文件、既定行業標準和安全工作實踐的行為準則 依照認可的程序和法定要求，制定和執行操作
採取預防措施防止危害	對適用《IGF 規則》船舶燃料系統操作相關的危害和控制措施的知識和理解，包括： .1 易燃性 .2 爆炸性 .3 毒性 .4 反應性 .5 腐蝕性 .6 健康危害 .7 惰性氣體組成 .8 靜電危害 .9 加壓氣體 .10 低溫 在受《IGF 規則》約束的船舶上熟練校準和使用燃料監測及探測系統、儀器和設備 不遵守相關規範/規則的危害的知識和理解 受《IGF 規則》約束的船舶上風險評估方法分析的知識和理解 詳細籌劃並建立與受《IGF 規則》約束的船舶風險相關的風險分析的能力	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	正確識別與適用《IGF 規則》船舶船上操作有關人員及船舶相關的危害，並採取恰當的控制措施 根據手冊和良好做法使用可燃及有毒氣體探測裝置

第 1 欄	第 2 欄	第 3 欄	第 4 欄
適任	知識、理解和熟練	表明適任的方法	評價適任的標準
	為受《IGF 規則》約束的船舶詳細籌劃並制定安全計劃及安全說明的能力 熱工、封閉空間、艙室的進入，包括准許程序的知識		
在受《IGF 規則》約束的船舶上應用職業健康和安全的預防措施和手段	正確適用安全設備和防護裝置，包括： .1 呼吸器和撤離裝置 .2 防護服及裝備 .3 復甦儀 .4 救助和逃生設備 符合法規、行業指南以及個人在船安全的安全工作做法以及程序的知識，包括: .1 對《IGF 規則》所列之燃料系統進行維修和保養工作之前、之中和之後採取的防護措施 .2 電氣安全（參照 IEC 600079-17） .3 船/岸安全檢查表 參照為《IGF 規則》所列燃料製作的《安全數據表》（SDS）進行急救的基本知識	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	正確使用適當的安全和防護設備 始終遵循旨在保護人員和船舶安全的程序 工作做法符合法定要求、操作規程、作業許可和環保要求 急救注意事項
受《IGF 規則》約束的船舶的防火、控制和消防及滅火系統的知識	關於探測、控制及撲滅《IGF 規則》所列之燃料火災的方法及消防裝置的知識	考試並評估從下列一項或數項獲取的證據： .1 經認可的工作經歷 .2 經認可培訓船經歷 .3 經認可的模擬器培訓 .4 經認可的培訓計劃	迅速確定問題的種類和範圍，採取的初步行動與為《IGF 規則》所列燃料制定的緊急程序一致 撤離、緊急關閉及隔離程序與《IGF 規則》所列之燃料相適應

"

RESOLUTION MSC.397(95)
(adopted on 11 June 2015)

AMENDMENTS TO PART A OF THE SEAFARERS' TRAINING, CERTIFICATION AND WATCHKEEPING (STCW) CODE

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 XII and regulation I/1.2.3 of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 ("the Convention"), concerning the procedures for amending part A of the Seafarers' Training, Certification and Watchkeeping (STCW) Code,

HAVING CONSIDERED, at its ninety-fifth session, amendments to part A of the STCW Code, proposed and circulated in accordance with article XII(1)(a)(i) of the Convention,

1 ADOPTS, in accordance with article XII(1)(a)(iv) of the Convention, amendments to the STCW Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article XII(1)(a)(vii)(2) of the Convention, that the said amendments to the STCW Code shall be deemed to have been accepted on 1 July 2016, unless, prior to that date, more than one third of Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant shipping of ships of 100 gross register tonnes or more, have notified to the Secretary-General of the Organization their objections to the amendments;

3 INVITES Parties to note that, in accordance with article XII(1)(a)(ix) of the Convention, the annexed amendments to the STCW Code shall enter into force on 1 January 2017 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article XII(1)(a)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to the Convention; and

5 REQUESTS ALSO the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization, which are not Parties to the Convention.

ANNEX

AMENDMENTS TO PART A OF THE SEAFARERS' TRAINING, CERTIFICATION AND WATCHKEEPING (STCW) CODE

CHAPTER V – SPECIAL TRAINING REQUIREMENTS FOR PERSONNEL ON CERTAIN TYPES OF SHIP

1 The following new section A-V/3 is added after existing section A-V/2:

"Section A-V/3

Mandatory minimum requirements for the training and qualification of masters, officers, ratings and other personnel on ships subject to the IGF Code

Basic training for ships subject to the IGF Code

1 Every candidate for a certificate in basic training for service on ships subject to the IGF Code shall:

.1.1 have successfully completed the approved basic training required by regulation V/3, paragraph 5, in accordance with their capacity, duties and responsibilities as set out in table A-V/3-1; and

.1.2 be required to provide evidence that the required standard of competence has been achieved in accordance with the methods and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-V/3-1; or

.2 have received appropriate training and certification according to the requirements for service on liquefied gas tankers as set out in regulation V/3, paragraph 6.

Advanced training for ships subject to the IGF Code

2 Every candidate for a certificate in advanced training for service on ships subject to the IGF Code shall:

.1.1 have successfully completed the approved advanced training required by regulation V/3, paragraph 8 in accordance with their capacity, duties and responsibilities as set out in table A-V/3-2; and

.1.2 provide evidence that the required standard of competence has been achieved in accordance with the methods and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-V/3-2; or

.2 have received appropriate training and certification according to the requirements for service on liquefied gas tankers as set out in regulation V/3, paragraph 9.

Exemptions

3 The Administration may, in respect of ships of less than 500 gross tonnage, except for passenger ships, if it considers that a ship's size and the length or character of its voyage are such as to render the application of the full requirements of this section unreasonable or impracticable, exempt the seafarers on such a ship or class of ships from some of the requirements, bearing in mind the safety of people on board, the ship and property and the protection of the marine environment.

Table A-V/3-1

Specification of minimum standard of competence in basic training for ships subject to the IGF Code

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Contribute to the safe operation of a ship subject to the IGF Code	Design and operational characteristics of ships subject to the IGF Code Basic knowledge of ships subject to the IGF Code, their fuel systems and fuel storage systems: .1 fuels addressed by the IGF Code .2 types of fuel systems subject to the IGF Code .3 atmospheric, cryogenic or compressed storage of fuels on board ships subject to the IGF Code .4 general arrangement of fuel storage systems on board ships subject to the IGF Code .5 hazard zones and areas .6 typical fire safety plan .7 monitoring, control and safety systems aboard ships subject to the IGF Code Basic knowledge of fuels and fuel storage systems' operations on board ships subject to the IGF Code: .1 piping systems and valves .2 atmospheric, compressed or cryogenic storage	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	Communications within the area of responsibility are clear and effective Operations related to ships subject to the IGF Code are carried out in accordance with accepted principles and procedures to ensure safety of operations

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.3 relief systems and protection screens .4 basic bunkering operations and bunkering systems .5 protection against cryogenic accidents .6 fuel leak monitoring and detection Basic knowledge of the physical properties of fuels on board ships subject to the IGF Code, including: .1 properties and characteristics .2 pressure and temperature, including vapour pressure/ temperature relationship Knowledge and understanding of safety requirements and safety management on board ships subject to the IGF Code		
Take precautions to prevent hazards on a ship subject to the IGF Code	Basic knowledge of the hazards associated with operations on ships subject to the IGF Code, including: .1 health hazards .2 environmental hazards .3 reactivity hazards .4 corrosion hazards .5 ignition, explosion and flammability hazards .6 sources of ignition	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	Correctly identifies, on a Safety Data Sheet (SDS), relevant hazards to the ship and to personnel, and takes the appropriate actions in accordance with established procedures Identification and actions on becoming aware of a hazardous

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.7 electrostatic hazards .8 toxicity hazards .9 vapour leaks and clouds .10 extremely low temperatures .11 pressure hazards .12 fuel batch differences Basic knowledge of hazard controls: .1 emptying, inerting, drying and monitoring techniques .2 anti-static measures .3 ventilation .4 segregation .5 inhibition .6 measures to prevent ignition, fire and explosion .7 atmospheric control .8 gas testing .9 protection against cryogenic damages (LNG) Understanding of fuel characteristics on ships subject to the IGF Code as found on a Safety Data Sheet (SDS)		situation conform to established procedures in line with best practice

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Apply occupational health and safety precautions and measures	Awareness of function of gas-measuring instruments and similar equipment: .1 gas testing Proper use of specialized safety equipment and protective devices, including: .1 breathing apparatus .2 protective clothing .3 resuscitators .4 rescue and escape equipment Basic knowledge of safe working practices and procedures in accordance with legislation and industry guidelines and personal shipboard safety relevant to ships subject to the IGF Code, including: .1 precautions to be taken before entering hazardous spaces and zones .2 precautions to be taken before and during repair and maintenance work .3 safety measures for hot and cold work Basic knowledge of first aid with reference to a Safety Data Sheet (SDS)	Examination or assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	Procedures and safe working practices designed to safeguard personnel and the ship are observed at all times Appropriate safety and protective equipment is correctly used First aid do's and don'ts

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Carry out firefighting operations on a ship subject to the IGF Code	Fire organization and action to be taken on ships subject to the IGF Code Special hazards associated with fuel systems and fuel handling on ships subject to the IGF Code Firefighting agents and methods used to control and extinguish fires in conjunction with the different fuels found on board ships subject to the IGF Code Firefighting system operations	Practical exercises and instruction conducted under approved and truly realistic training conditions (e.g. Simulated shipboard conditions) and, whenever possible and practicable, in darkness	Initial actions and follow-up actions on becoming aware of an emergency conform with established practices and procedures Action taken on identifying muster signals is appropriate to the indicated emergency and complies with established procedures Clothing and equipment are appropriate to the nature of the firefighting operations The timing and sequence of individual actions are appropriate to the prevailing circumstances and conditions Extinguishment of fire is achieved using appropriate procedures techniques and firefighting agents

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Respond to emergencies	Basic knowledge of emergency procedures, including emergency shutdown	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	The type and impact of the emergency is promptly identified and the response actions conform to the emergency procedures and contingency plans
Take precautions to prevent pollution of the environment from the release of fuels found on ships subject to the IGF Code	Basic knowledge of measures to be taken in the event of leakage/spillage/ venting of fuels from ships subject to the IGF Code, including the need to: .1 report relevant information to the responsible persons .2 awareness of shipboard spill/leakage/venting response procedures .3 awareness of appropriate personal protection when responding to a spill/ leakage of fuels addressed by the IGF Code	Examination or assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	Procedures designed to safeguard the environment are observed at all times

Table A-V/3-2

Specification of minimum standard of competence of advanced training for ships subject to the IGF Code

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Familiarity with physical and chemical properties of fuels aboard ships subject to the IGF Code	Basic knowledge and understanding of simple chemistry and physics and the relevant definitions related to safe bunkering and use of fuels used on board ships subject to the IGF Code, including: .1 the chemical structure of different fuels used on board ships subject to the IGF Code .2 the properties and characteristics of fuels used on board ships subject to the IGF Code, including: .2.1 simple physical laws .2.2 states of matter .2.3 liquid and vapour densities .2.4 boil-off and weathering of cryogenic fuels .2.5 compression and expansion of gases .2.6 critical pressure and temperature of gases	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	Effective use is made of information resources for identification of properties and characteristics of fuels addressed by the IGF Code and their impact on safety, environmental protection and ship operation

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.2.7 flashpoint, upper and lower flammable limits, auto-ignition temperature .2.8 saturated vapour pressure/reference temperature .2.9 dewpoint and bubble point .2.10 hydrate formation .2.11 combustion properties: heating values .2.12 methane number/ knocking .2.13 pollutant characteristics of fuels addressed by the IGF Code .3 the properties of single liquids .4 the nature and properties of solutions .5 thermodynamic units .6 basic thermodynamic laws and diagrams .7 properties of materials .8 effect of low temperature, including brittle fracture, for liquid cryogenic fuels Understanding the information contained in a Safety Data Sheet (SDS) about fuels addressed by the IGF Code		

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Operate controls of fuel related to propulsion plant and engineering systems and services and safety devices on ships subject to the IGF Code	Operating principles of marine power plants Ships' auxiliary machinery Knowledge of marine engineering terms	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	Plant, auxiliary machinery and equipment is operated in accordance with technical specifications and within safe operating limits at all times
Ability to safely perform and monitor all operations related to the fuels used on board ships subject to the IGF Code	Design and characteristics of ships subject to the IGF Code Knowledge of ship design, systems, and equipment found on ships subject to the IGF Code, including: .1 fuel systems for different propulsion engines .2 general arrangement and construction .3 fuel storage systems on board ships subject to the IGF Code, including materials of construction and insulation .4 fuel-handling equipment and instrumentations on board ships: .4.1 fuel pumps and pumping arrangements .4.2 fuel pipelines	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	Communications are clear and understood Successful ship operations using fuels addressed by the IGF Code are carried out in a safe manner, taking into account ship designs, systems and equipment Pumping operations are carried out in accordance with accepted principles and procedures and are relevant to the type of fuel Operations are planned, risk is managed and carried out in accordance with accepted principles and procedures to ensure safety of operations and to avoid pollution of the marine environment

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.4.3 expansion devices .4.4 flame screens .4.5 temperature monitoring systems .4.6 fuel tank level-gauging systems .4.7 tank pressure monitoring and control systems .5 cryogenic fuel tanks temperature and pressure maintenance .6 fuel system atmosphere control systems (inert gas, nitrogen), including storage, generation and distribution .7 toxic and flammable gas-detecting systems .8 fuel Emergency Shut Down system (ESD) Knowledge of fuel system theory and characteristics, including types of fuel system pumps and their safe operation on board ships subject to the IGF Code .1 low pressure pumps .2 high pressure pumps .3 vaporizers .4 heaters		

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.5 pressure build-up units Knowledge of safe procedures and checklists for taking fuel tanks in and out of service, including: .1 inerting .2 cooling down .3 initial loading .4 pressure control .5 heating of fuel .6 emptying systems		
Plan and monitor safe bunkering, stowage and securing of the fuel on board ships subject to the IGF Code	General knowledge of ships subject to the IGF Code Ability to use all data available on board related to bunkering, storage and securing of fuels addressed by the IGF Code Ability to establish clear and concise communications and between the ship and the terminal, truck or the bunker- supply ship Knowledge of safety and emergency procedures for operation of machinery, fuel- and control systems for ships subject to the IGF Code Proficiency in the operation of bunkering systems on board ships subject to the IGF Code including:	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved simulator training .3 approved training programme .4 approved laboratory equipment training or witnessing bunker operation	Fuel quality and quantity is determined taking into account the current conditions and necessary corrective safe measures are taken Procedures for monitoring safety systems to ensure that all alarms are detected promptly and acted upon in accordance with established procedures Operations are planned and carried out in accordance with fuel transfer manuals and procedures to ensure safety of operations and avoid spill damages and pollution of the environment

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	.1 bunkering procedures .2 emergency procedures .3 ship-shore/ship-ship interface .4 prevention of rollover Proficiency to perform fuel-system measurements and calculations, including: .1 maximum fill quantity .2 On Board Quantity (OBQ) .3 Minimum Remain On Board (ROB) .4 fuel consumption calculations Ability to ensure the safe management of bunkering and other IGF Code fuel related operations concurrent with other onboard operations, both in port and at sea		Personnel are allocated duties and informed of procedures and standards of work to be followed, in a manner appropriate to the individuals concerned and in accordance with safe working procedures
Take precautions to prevent pollution of the environment from the release of fuels from ships subject to the IGF Code	Knowledge of the effects of pollution on human and environment Knowledge of measures to be taken in the event of spillage/leakage/ venting	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service .2 approved training ship experience .3 approved simulator training .4 approved training programme	Procedures designed to safeguard the environment are observed at all times

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Monitor and control compliance with legislative requirements	Knowledge and understanding of relevant provisions of the International Convention for the Prevention of Pollution from Ships (MARPOL), as amended and other relevant IMO instruments, industry guidelines and port regulations as commonly applied Proficiency in the use of the IGF Code and related documents	Assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training	The handling of fuels on board ships subject to the IGF Code complies with relevant IMO instruments and established industrial standards and codes of safe working practices Operations are planned and performed in conformity with approved procedures and legislative requirements
Take precautions to prevent hazards	Knowledge and understanding of the hazards and control measures associated with fuel system operations on board ships subject to the IGF Code, including: .1 flammability .2 explosion .3 toxicity .4 reactivity .5 corrosivity .6 health hazards .7 inert gas composition .8 electrostatic hazards .9 pressurized gases .10 low temperature	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service .2 approved training ship experience .3 approved simulator training .4 approved training programme	Relevant hazards to the ship and to personnel associated with operations on board ships subject to the IGF Code are correctly identified and proper control measures are taken Use of flammable and toxic gas-detection devices are in accordance with manuals and good practice

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Proficiency to calibrate and use monitoring and fuel detection systems, instruments and equipment on board ships subject to the IGF Code Knowledge and understanding of dangers of non-compliance with relevant rules/regulations Knowledge and understanding of risks assessment method analysis on board ships subject to the IGF Code Ability to elaborate and develop risks analysis related to risks on board ships subject to the IGF Code Ability to elaborate and develop safety plans and safety instructions for ships subject to the IGF Code Knowledge of hot work, enclosed spaces and tank entry including permitting procedures		
Apply occupational health and safety precautions and measures on board a ship subject to the IGF Code	Proper use of safety equipment and protective devices, including: .1 breathing apparatus and evacuating equipment .2 protective clothing and equipment .3 resuscitators .4 rescue and escape equipment	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience	Appropriate safety and protective equipment is correctly used Procedures designed to safeguard personnel and the ship are observed at all times

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
	Knowledge of safe working practices and procedures in accordance with legislation and industry guidelines and personal shipboard safety including: .1 precautions to be taken before, during and after repair and maintenance work on fuel systems addressed in the IGF Code .2 electrical safety (reference to IEC 600079-17) .3 ship/shore safety checklist Basic knowledge of first aid with reference to a Safety Data Sheets (SDS) for fuels addressed by the IGF Code	.3 approved simulator training .4 approved training programme	Working practices are in accordance with legislative requirements, codes of practice, permits to work and environmental concerns First aid do's and don'ts
Knowledge of the prevention, control and firefighting and extinguishing systems on board ships subject to the IGF Code	Knowledge of the methods and firefighting appliances to detect, control and extinguish fires of fuels addressed by the IGF Code	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training .4 approved training programme	The type and scale of the problem is promptly identified, and initial actions conform with the emergency procedures for fuels addressed by the IGF Code Evacuation, emergency shutdown and isolation procedures are appropriate to the fuels addressed by the IGF Code

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二零二六年一月二日於行政長官辦公室

辦公室主任　陳格

Gabinete do Chefe do Executivo, aos 2 de Janeiro de 2026.

A Chefe do Gabinete, *Chan Kak*.