# تعديلات عام 2015 على الجزء ألف من مدونة التدريب والإجازة والخفارة للملاّحين (مدونة STCW)

(القرار (MSC.397(95))

### 《海员培训、发证和值班规则》A部分的2015年修正案

(第MSC.397(95)号决议)

2015 AMENDMENTS TO PART A OF THE SEAFARERS' TRAINING, CERTIFICATION AND WATCHKEEPING (STCW) CODE

(Resolution MSC.397(95))

AMENDEMENTS DE 2015 À LA PARTIE A DU CODE DE FORMATION DES GENS DE MER, DE DÉLIVRANCE DES BREVETS ET DE VEILLE (CODE STCW)

(Résolution MSC.397(95))

ПОПРАВКИ 2015 ГОДА К ЧАСТИ А КОДЕКСА ПО ПОДГОТОВКЕ И ДИПЛОМИРОВАНИЮ МОРЯКОВ И НЕСЕНИЮ ВАХТЫ (КОДЕКС ПДНВ)

(Резолюция MSC.397(95))

ENMIENDAS DE 2015 A LA PARTE A DEL CÓDIGO DE FORMACIÓN, TITULACIÓN Y GUARDIA PARA LA GENTE DE MAR (CÓDIGO DE FORMACIÓN)

(Resolución MSC.397(95))

# 第 MSC.397(95)号决议 (2015 年 6 月 11 日通过)

### 《海员培训、发证和值班规则》A部分的修正案

### 海上安全委员会,

忆及《国际海事组织公约》关于本委员会职能的第二十八条第(二)款,

进一步忆及《1978 年海员培训、发证和值班标准国际公约》(本公约)第 XII 条及第 I/1.2.3 条关于《海员培训、发证和值班规则》A 部分修正程序的规定,

在其第 95 届会议上,**审议了**按照本公约第 XII(1)(a)(i)条提出和散发的《培训规则》A 部分的修正案,

- 1 按照本公约第 XII(1)(a)(iv)条,通过《培训规则》的修正案,其文本载于本决议附件:
- 2 按照本公约第 XII(1)(a)(vii)(2)条, 决定上述《培训规则》修正案须在 2016 年 7 月 1 日 视为已被接受,除非在此日期之前,有三分之一以上的本公约缔约国,或其商船合计吨位不少于世界 100 总登记吨或以上的商船总吨位的 50%的缔约国,通知秘书长其反对该修正案;
- 3 请各缔约国注意,按照本公约第 XII(1)(a)(ix)条,附件中《培训规则》的修正案在按照以上第 2 段被接受后,将于 2017 年 1 月 1 日生效;
- **要求**秘书长本着本公约第 XII(1)(a)(v)条,将本决议及其附件中的修正案文本的核证无误副本发送给本公约各缔约国;并
- **5 进一步要求**秘书长将本决议及其附件的副本发送给非本公约缔约国的本组织会员国。

### 附件

### 《海员培训、发证和值班标准规则》A部分的修正案

### 第 V 章 - 特定类型船舶人员的特殊培训要求

1 在现有的第 A-V/2 节之后加入以下新的 A-V/3 节:

### "第 A-V/3 节

受《IGF 规则》约束的船舶的船长、高级船员、普通船员及其他人员培训和资格的强制性最低要求。

### 受《IGF 规则》约束船船舶的基本培训

- 1 每位申请受《IGF 规则》约束的船舶基本培训证书的人士须:
  - .1.1 根据表 A-V/3-1 所要求的职能、职责和责任,已圆满完成规则第 V/3 条第 5 款规定的经认可的基本培训;并且
  - .1.2 按表 A-V/3-1 第 3 栏和第 4 栏所列的评价适任的方法和标准,提供已达到所要求的适任标准的证据:或者
  - .2 已根据规则第 V/3 条第 6 款关于在液化气船上服务的要求,进行了 适当的培训和发证。

### 受《IGF规则》约束的船舶的高级培训

- 2 每位申请受《IGF 规则》约束的船舶高级培训证书的人士应:
  - .1.1 根据表 A-V/3-2 所要求的能力、职责和责任,已圆满完成规则第 V/3 条第 8 款规定的经认可的高级培训:并且
  - .1.2 接表 A-V/3-2 第 3 栏和第 4 栏所列的评价适任的方法和标准,提供已达到所要求的适任标准的证明:或者
  - .2 已根据规则第 V/3 条第 9 款关于在液化气船上服务的要求,进行了 适当的培训和发证。

### 免除

3 对于客船以外的 500 总吨以下的船舶,如基于该船的尺度及航程长短或性质,主管机关认为执行本节全部要求不合理或者不可行时,在充分考虑到船上人员、船舶和财产安全及保护海洋环境的前提下,可对某一船舶或某一船级的船舶上的海员免除部分要求。

表 A-V/3-1

受《IGF规则》约束的船舶基本培训的最低适任标准

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
		· ·	
	.6 典型防火计划 .7 受《IGF 规则》约束的船舶的监测、控制和安全系统 受《IGF 规则》约束的船舶燃料及燃料存储系统操作基本知识: .1 管系及阀门 .2 常压、低温及压缩存储 .3 施放系统及防护屏蔽 .4 基本燃料加注操作及加注系统		

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
	.5 对低温事故的防护 .6 燃料泄漏监控及探测 受《IGF 规则》约束的船舶的 燃料物理性质的基本知识,包括: .1 性质及特征 .2 压力及温度,包括蒸气压力/温度关系 受《IGF 规则》约束的船舶安全要求及安全管理的知识和理解		
受《IGF 规则》的现在形式,这个不是一个不是一个不是一个不是一个不是一个不是一个不是一个不是一个不是一个不是一	有关受(IGF 规则》约束的船包括:	考试并评估获取 (1) 经历 (2) 经历 (3) 经 (4) 经 (5) 经 (5) 是 (6) 是 (7) 是 (7	正确以(SDS)(SDS)(SDS)(SDS)(SDS)(SDS)(SDS)(SDS

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
	.5 货物抑制 .6 防止点燃、火灾及爆炸的措施 .7 常压控制 .8 气体测试 .9 对低温伤害的防护(液化天然气) 受《IGF规则》约束的船舶上《安全数据表》(SDS)中燃料特性的理解		
应用实验的证据,这个人的证明,但是不是不是不是不是不是的。	了解气体测量器和类似设备的功能: .1 气体测试 专用安全设备和防护装置的正确使用,包括: .1 呼吸器 .2 防护服 .3 复苏仪 .4 救援和逃生设备 符合与受《IGF规则》约指决及工作做法规工作做法规工作做法规实工作做法规实工作做法规实工作的基本知识: .1 进入危险空间或工业防海危险系和保养面的方护措施 .2 维修和保养面间或工业防护措施 .3 热工和冷工作业的安全措施 参照《安全数据表》(SDS)进行急救的基本知识	考试或项据: .1 经历 认 可 的 培 的 的 培 的 的 的 的 的 的 的 的 的 的 的 的 的 的	始终是 一种 一种 一种 一种 一种 一种 一种 一种 一种 一种

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
在受《IGF 规则》约束的船上执行消防操作	在《IGF规则》约束的船舶 上的消防组织及应采取的 行动 在《IGF规则》约束的船舶 上与燃料系统及燃料处理 相关的特殊危害 在《IGF规则》约束的船舶 上的控制和扑灭不同种类 燃料引起的火灾所使用的 灭火剂和方法 消防系统的操作	在认可的真实培训环境 下(如模拟船上环境)进 行实操训练和指导,并 在任何可能及可行的情 况下,在黑暗条件下进 行上述训练	意采行和 识取所养 防消 单顺境 使技灭别的符合 型适紧定 设的 的与相 别的表帝 人名斯特 的现在分词 人名
应急响应	应急程序的基本知识,包 括紧急关闭	考试并评估从下列一项或数项获取的证据: .1 经认可的工作经历 .2 经认可培训船经历 .3 经认可的模拟器培训 .4 经认可的培训计划	迅速识别紧急情况 的类型和影响,并 采取符合紧急程序 和应急计划的行动
采取预防措施,防止适用《IGF规则》船舶燃料泄漏导致环境污染	应对受《IGF规则》约束的船舶上燃料泄漏/溢出/气体排放采取的措施的基本知识,包括需要: .1 向责任人报告相关信息 .2 了解船上溢出/泄漏/气体排放的响应程序 .3 了解《IGF规则》列明之燃料溢出/泄漏时适当的人员防护	考试或评估从下列一项或数项获取的证据: .1 经认可的工作经历 .2 经认可培训船经历 .3 经认可的模拟器培训 .4 经认可的培训计划	始终遵循旨在保护 环境的程序

### 表 A-V/3-2

适用《IGF规则》船舶高级培训的最低适任标准

第1栏	第2栏	第 3 栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
熟悉则船物理《IGF的料学	关于安全的关键。 (IGF 规则》的用型解,的用型解的,为用型解,的用型解,的用型解,的用型解,的用型解,的用型解,的用型解,的用型解,的	考项据:	有效(IGF 规则)以用信息源,以则则则是有效,则则则则则则则则则则则则则则则则则则则则则则则则则则则则则则则则则

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
	.8 低温的影响,包括针对低温液体燃料的脆性开裂对《安全数据表》(SDS)中的列于《IGF规则》的燃料信息的理解		
操作与受》的推机系统安的推机系统安的推系。 有关的,是是一个的,并不是一个的,并是是一个的。 是一个的,是一个的,是一个的,是一个的,是一个的,是一个的,是一个的,是一个的,	船舶动力装置的工作原理 船舶辅机 船舶轮机术语的知识	考试并评估从下列一项或数项获取的证据: .1 经认可的工作经历   .2 经认可培训船经   历   .3 经认可的模拟器   培训   .4 经认可的培训计   划	始终按照技术规范 并在安全操作的限 制内,操作动力装 置、辅机和设备
安全受《IGF 规则》的使用的 燃料有关作的能力	受《IGF 规则》约束的船舶的设计和特性 受《IGF 规则》约束的船舶的设计、系统和设备的知识,包括: .1 不同推进引擎的燃料系统 .2 总体布置和构造 .3 受《IGF 规则》约束的船舶的船上燃料储存系统,包括构造和分隔材料 .4 船上的燃料装卸设备和仪器 .4.1 燃料泵及泵系布置 .4.2 燃料管系 .4.3 膨胀装置 .4.4 火焰防护网	考试并评估从下列一项获取的证据: .1 经认可的工作经历 经历 经历 经历 经历 经	交流清楚、易懂 考虑和方子。 考虑和方子。 是一个人。 是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
	.4.5 温度监控装置		
	.4.6 燃料舱液位计量系统		
	.4.7 舱压监测和控制系统		
	.5 低温燃料舱温度压力保持		
	.6 燃料系统空气控制系统 (惰性气体、氮气),包括 储存、发生和分配系统		
	.7 有毒和可燃气体探测系统		
	.8 燃料紧急关闭系统(ESD)		
	燃料系统理论和特性的知识,包括受《IGF规则》约束的船舶燃料系统泵的种类及其安全操作		
	.1 低压泵		
	.2 高压泵		
	.3 气化器		
	.4 加热器		
	.5 加压单元		
	有关启用及停用燃料舱的安全程序及检查表的知识,包括:		
	.1 惰化		
	.2 冷却		
	.3 初步装载		
	.4 压力控制		
	.5 燃料加热		
	.6 清空系统		

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
计《约燃装定 划原的的配数则的全和。 以现的生物。	受《IGF规则》约束的船舶的名词形式 (IGF规则》约束的是 (IGF规则》约束的 (IGF规则》为 (IGF规则》为 (IGF规则, (IGF视则, (IGF心则, (	考试并评估从下列的证据: .1 经历 经历 经历 经历 经历 以训 可的 增 的 增 的 增 的 增 的 增 的 增 的 增 的 增 的 增 的	根燃量安有程测按取 根以和作至 以方作作遵标据料,全 安序到照行 据及操安损 适式程职循形的采正 监保有定 料序,,污 相根分并程则证警的 转进以避染 关据配告序况 人全员其工统 人全员其工物的探诉采 册划操出 的工工应作

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
采取预防措施 防止受《IGF 规则》约束的 船舶燃料泄露 造成环境污染	污染对人类以及环境的影响的知识 发生溢出/泄露/排气时所应 采取措施的知识	考试并评估从下列一项或数项获取的证据: .1 经认可的工作经历 .2 经认可培训船经历 .3 经认可的模拟器培训 .4 经认可的培训计划	始终遵循旨在保护 环境的程序
监督和控制立 法要求的遵守 情况	关于经修订的《国际防止船舶 造成污染公约》 (MARPOL)的相关规定和其他普遍采用的相关 IMO文件、行业指南和港口规则的知识和理解熟练运用《IGF规则》及相关文件	评估从下列一项或数项获取的证据: .1 经认可的工作经历 .2 经认可培训船经历 .3 经认可的模拟器培训 .4 经认可的培训	适用《IGF 规则》 船舶上的燃料作业 操作符合国际海事 组织的相关文件、 既定行业标准和安 全工作实践的行为 准则 依照认可的程序和 法定要求,制定和 执行操作
采取预防措施防止危害	对适用《IGF 规则》船舶燃料系统操作相关的危害和控制措施的知识和理解,包括: .1 易燃性 .2 爆炸性 .3 毒性 .4 反应性 .5 腐蚀性 .6 健康危害 .7 惰性气体组成 .8 静电危害 .9 加压气体 .10 低温	考试并评估从下列一项或数项获取的证据: .1 经认可的工作经历 .2 经认可培训船经历 .3 经认可的模拟器培训 .4 经认可的培训计划	正确识别与适用 《IGF 规则》船舶 船上操作有关人负危 害,并不知知。 控制措施 根据手册和良好做 法使用测装置

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
在则舶健预段 《约应和措 《约应和措 规船业的手	在舶测 不害 受上和 详规的 为舶及 热入 正置 .1 .2 .3 被为用知知 以为 以为 的 以 以 , 则 的 的 以 以 , 的 以 以 , 的 的 的 以 的 的 的 的 的 的 的	考项据: .1 经历 经历 经历 经历 以训 认可可 可 的 培 的 培 的 的 培 的 的 的 给 经 经 器 .4 .4 .4	正全 始人程 工要作求 急的 保全 始人程 工要作求 急救 在安 合规环 明前

第1栏	第2栏	第3栏	第4栏
适任	知识、理解和熟练	表明适任的方法	评价适任的标准
受《IGF 规则》 约束的船舶的 防火、控制和 消防及灭 统的知识	关于探测、控制及扑灭《IGF规则》所列之燃料火灾的方法及消防装置的知识	考试并评估从下列一项或数项获取的证据 .1 经认可的工作经历 .2 经认可培训船经历 .3 经认可的模拟器培训 .4 经认可的培训计划	迅速确定问题的种类和范围,动与所列以上,动与所列以所列以所列以所列以所列以所列的。 以外,所列以所为。 以外,所列以所为。 以外,所列以所, 以外,所列以所, 以外,所列以所, 以外,所列。 以外,以外,以外,以外,以外,以外,以外,以外,以外,以外,以外,以外,以外,以

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# 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;
- 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

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
  - 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**

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		responsibility are clear and effective

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:	Examination and assessment of evidence obtained from one or more of the following:	Correctly identifies, on a Safety Data Sheet (SDS), relevant hazards to
	.1 health hazards	.1 approved in-service experience	the ship and to personnel, and takes the
	<ul><li>.2 environmental hazards</li><li>.3 reactivity hazards</li></ul>	.2 approved training ship experience	appropriate actions in accordance with established
	.4 corrosion hazards	.3 approved simulator	procedures
	.5 ignition, explosion and flammability hazards	.4 approved training	Identification and actions on
	.6 sources of ignition	programme	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
	<ul><li>.7 electrostatic hazards</li><li>.8 toxicity hazards</li><li>.9 vapour leaks and clouds</li><li>.10 extremely low temperatures</li><li>.11 pressure hazards</li></ul>		situation conform to established procedures in line with best practice
	<ul><li>.12 fuel batch differences</li><li>Basic knowledge of hazard controls:</li><li>.1 emptying, inerting, drying and monitoring</li></ul>		
	techniques  .2 anti-static measures  .3 ventilation  .4 segregation  .5 inhibition		
	<ul> <li>.6 measures to prevent ignition, fire and explosion</li> <li>.7 atmospheric control</li> <li>.8 gas testing</li> <li>.9 protection against cryogenic damages (LNG)</li> <li>Understanding of fuel characteristics on ships subject to the IGF Code as found on a Safety Data</li> </ul>		

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 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	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 IGF Code are carried out in a safe manner, taking into account ship designs, systems

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		

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Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
	<ol> <li>bunkering procedures</li> <li>emergency procedures</li> <li>ship-shore/ship-ship interface</li> <li>prevention of rollover</li> <li>Proficiency to perform fuel-system measurements and calculations, including:</li> <li>maximum fill quantity</li> <li>On Board Quantity (OBQ)</li> <li>Minimum Remain On Board (ROB)</li> <li>fuel consumption calculations</li> <li>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</li> </ol>		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 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		
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	<ul><li>.3 approved simulator training</li><li>.4 approved training programme</li></ul>	Working practices are in accordance with legislative requirements, codes of practice, permits to work and environmental concerns  First aid do's and don'ts
	aid with reference to a Safety Data Sheets (SDS) for fuels addressed by the IGF Code		
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	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
		<ul><li>.2 approved training ship experience</li><li>.3 approved simulator training</li><li>.4 approved training programme</li></ul>	Evacuation, emergency shutdown and isolation procedures are appropriate to the fuels addressed by the IGF Code

نسخة صادقة مصدقة من نص التعديلات على الجزء ألف من مدونة التدريب والإجازة والخفارة للملاحين (مدونة (STCW) التي اعتمدتها لجنة السلامة البحرية التابعة للمنظمة البحرية الدولية في دورتها الخامسة والتسعين ، في 11 حزيران/يونيو 2015 ، بموجب المادة (iv)(أ)(1)XII) من الاتفاقية ، وترد في مرفق القرار (MSC.397(95) ، وقد أودع النص الأصلى لدى الأمين العام للمنظمة البحرية الدولية .

此件系国际海事组织海上安全委员会于公元二零一五年六月十一日在其第九十五届会议上按照经修正的 《1974 年海员培训、发证和值班标准国际公约》第 XII(1)(a)(iv)条通过、并载于第 MSC.397(95)号决议 附件中的《海员培训、发证和值班规则》A 部分修正案文本的核证无误副本,其原件由国际海事组织秘 书长保存。

CERTIFIED TRUE COPY of the text of the amendments to part A of the Seafarers' Training, Certification and Watchkeeping (STCW) Code, adopted on 11 June 2015 by the Maritime Safety Committee of the International Maritime Organization at its ninety-fifth session, in accordance with article XII(1)(a)(iv) of the Convention, and set out in the annex to resolution MSC.397(95), the original text of which is deposited with the Secretary General of the International Maritime Organization.

COPIE CERTIFIÉE CONFORME du texte des amendements à la partie A du Code de formation des gens de mer, de délivrance des brevets et de veille (Code STCW), adoptés le 11 juin 2015 par le Comité de la sécurité maritime de l'Organisation maritime internationale, à sa quatre vingt quinzième session. conformément à l'article XII 1) a) iv) de la Convention, tel qu'il figure en annexe à la résolution MSC.397(95) et dont l'original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

ЗАВЕРЕННАЯ КОПИЯ текста поправок к части А Кодекса по подготовке и дипломированию моряков и несению вахты (Кодекс ПДНВ), одобренных 11 июня 2015 года Комитетом по безопасности на море Международной морской организации на его девяносто пятой сессии в соответствии со статьей XII 1) a) iv) Конвенции и изложенных в приложении к резолюции MSC.397(95), подлинник которых сдан на хранение Генеральному секретарю Международной морской организации.

COPIA AUTÉNTICA CERTIFICADA del texto de las enmiendas a la parte A del Código de formación. titulación y guardia para la gente de mar (Código de formación), adoptadas el 11 de junio de 2015 por el Comité de seguridad marítima de la Organización Marítima Internacional en su 95º periodo de sesiones, de conformidad con el artículo XII 1) a) iv) del Convenio, y que figuran en el anexo de la resolución MSC.397(95), cuyo texto original ha sido depositado ante el Secretario General de la Organización Marítima Internacional.

عن الأمين العام للمنظمة البحرية الدولية 🚼

国际海事组织秘书长代表:

For the Secretary-General of the International Maritime Organization: Pour le Secrétaire général de l'Organisation maritime internationale : За Генерального секретаря Международной морской организации: Por el Secretario General de la Organización Marítima Internacional:

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