#### Translation. Only the Danish version has legal validity

Order no. 1691 of 15 December 2016 issued by the Danish Maritime Authority

# Order on special training requirements for personnel on ships using gas for propulsion

In pursuance of section 18(1)(i) and (iii), section 24b, section 25(4), section 25b(1) and (2), section 27(3) and section 28(5) of the act on the manning of ships (*lov om skibes besætning*), cf. consolidated act no. 74 of 17 January 2014, and following consultation with the shipowner and seafarer organisations, the following provisions are laid down:

#### Part 1

## Purpose

**Section 1.** This order stipulates the training requirements for masters, officers and ratings and other personnel who have been assigned safety duties on board ships covered by the IGF Code,<sup>1</sup> cf. the International Convention on Standards of Training, Certification and Watchkeeping (STCW) for seafarers, 1978, as amended, regulation V/3.

#### Application

**Section 2.** This order shall apply to seafarers on board ships subject to the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels for propulsion (the IGF Code).

*Subsection 2.* All seafarers employed or engaged on board shall, when signing on, receive ship and equipment specific instructions approved by the shipowner in accordance with their functions on board.

*Subsection 3.* Seafarers responsible for assigned safety duties associated with the care, use or in emergency response to the fuel on ships subject to the IGF Code shall hold a valid certificate in basic training for seafarers on board ships subject to the IGF Code in accordance with the STCW Code, A-V/3, paragraph 1.

*Subsection 4.* Masters, engineer officers and all personnel with immediate responsibility for the care and use of fuels and fuel systems on board ships subject to the IGF Code shall hold a valid certificate in advanced training for service on ships subject to the IGF Code in accordance with the STCW Code, A-V/3, paragraph 2.

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Cf. the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels), as defined in SOLAS regulation II-1/2.29.

#### Part 2

## Purpose and contents Course in basic service on board ships subject to the IGF Code

**Section 3.** The purpose of the course is for the seafarer to acquire the knowledge, understanding and competences associated with the work on board ships subject to the IGF Code necessary and thus meet the training requirements in accordance with annex 1.

#### Course in advanced service on board ships subject to the IGF Code

**Section 4.** The purpose of the course is for the seafarer to acquire the knowledge, understanding and competences associated with the work on board ships subject to the IGF Code and thus meet the training requirements in accordance with annex 2.

## Part 3 Qualification requirements

**Section 5.** In order to take part in a basic course for service on board ships subject to the IGF Code, cf. section 3, the seafarer shall meet the general provisions stipulated in the current order on the qualification requirements for seafarers and fishermen and on certificates of competency and certificates of proficiency to form part of the deck, machinery or general purpose crew on board a Danish ship.

**Section 6.** In order to take part in an advanced course for service on board ships subject to the IGF Code, cf. section 4, the seafarer shall hold a valid certificate in the basic course, cf. section 3, as described in annex 1.

#### Part 4

#### Requirements for maintaining competences

**Section 7.** Persons holding qualification certificates in accordance with sections 3 and 4 shall, at least every fifth year, be able to document three months' seagoing service within the last five years on board ships subject to the IGF Code.

*Subsection 2.* Persons who do not meet the seagoing service requirement stipulated in subsection 1 shall complete a relevant course for having the certificate renewed.

#### Part 5

### Course providers and requirements for instructor qualifications

Section 8. Course providers shall have been approved by the Danish Maritime Authority in accordance with the current provisions on the approval and quality assurance, etc. of maritime training programmes. **Section 9.** Course providers shall ensure that the instructors have the qualifications necessary to teach the courses stipulated. This includes their professional qualifications as well as their instructor and teacher qualifications.

**Section 10.** Course providers shall, on the basis of the course goals stipulated in annexes 1 and 2, determine the more detailed course planning, including the duration of the courses, in consideration of the course participants' qualifications.

#### Part 6

## Issuing and recording certificates

**Section 11.** The course provider shall issue certificates to seafarers who have completed the basic course for service on board ships subject to the IGF Code.

Subsection 2. The certificate shall have the form shown in annex 3.

**Section 12.** The Danish Maritime Authority shall issue certificates to seafarers who have completed the advanced course for service on board ships subject to the IGF Code, upon application by means of the Danish Maritime Authority's electronic application form, provided that the seafarer has subsequently completed at least 1 month's approved seagoing service covering at least three bunker operations on board ships subject to the IGF Code.

*Subsection 2.* It shall be possible to replace two of the three bunker operations by approved simulator training in bunker operations as part of the training as described in annex 2.

*Subsection 3.* The Danish Maritime Authority shall issue certificates to seafarers who meet the conditions stipulated in section 16 upon application by means of the Danish Maritime Authority's electronic application form.

Subsection 4. The certificate shall have the form shown in annex 4.

*Subsection 5.* When forwarding an application to the Danish Maritime Authority for being issued with certificates or copies of certificates, a fee shall be required, cf. the Danish Maritime Authority's rates of fees.

**Section 13.** The course provider shall record the issue of the course certificate. The recording shall be kept for five years and contain information about the date of issue or, if this is unknown, the age, name and date of birth of the seafarer.

*Subsection 2.* The course provider shall inform the Danish Maritime Authority about the courses completed by means of the digital reporting system of the Danish Maritime Authority.

#### Part 7

#### Penalty provisions

**Section 14.** Contraventions of this order shall be punishable by fine. Any shipowner or master contravening section 2 shall be liable to punishment by fine or imprisonment for a term not exceeding one year.

*Subsection 2.* The penalty may be increased to imprisonment for a term not exceeding two years if the violation was committed intentionally or grossly negligently and if the contravention:

- 1) has caused injury to young people below the age of 18 or provoked a risk of injury, or
- 2) has resulted in or aimed at a financial benefit, comprising also financial savings, for the contravener or for others.

*Subsection 3.* If the benefit obtained through the contravention is not confiscated, the size of such financial benefit obtained or aimed at shall be taken into account when determining the fine, including additional fines, cf. subsection 2(ii).

*Subsection 4.* Companies, etc. (legal persons) may incur criminal liability according to the provisions of part 5 of the criminal code (*straffeloven*).

*Subsection 5.* When determining criminal liability pursuant to subsection 4, persons who have been employed to carry out work on board the ship by others than the shipowner shall also be considered affiliated with the shipowner. If a document of compliance has been issued in accordance with the Code on the Safe Operation of Ships or a certificate in accordance with the Maritime Labour Convention to another organisation or person, the master and the seafarers shall also be considered to be affiliated with the one to whom the document has been issued.

#### Interim provision

**Section 15.** Seafarers covered by section 2(1) shall be able to document having met the requirements stipulated in section 3 within the last 5 years.

**Section 16.** Masters, engineer officers and all personnel with immediate responsibility for the care and use of fuels and fuel systems on board ships subject to the IGF Code holding a valid certificate for the management of gas tanker operations (STCW A-V/1-2, paragraph 2) shall be considered to meet the requirements of section 4 of this order provided they:

- 1) meet the requirements stipulated in section 4;
- 2) meet the requirements for bunker operations described in section 6 or have completed at least three loading/unloading operations on board a gas tanker;
- 3) have completed at least three months' seagoing service within the last five years on board:
  - a) ships covered by the IGF Code;
  - b) tankers carrying cargoes covered by the IGF Code; or
  - c) ships using gases or other low-flashpoint fuels for propulsion.

**Section 17.** Seafarers who have completed a training programme corresponding to the conditions stipulated in sections 3 and 4 before the entry into force of this order may apply for a new certificate by means of the Danish Maritime Authority's electronic application form.

*Subsection 2.* The Danish Maritime Authority shall issue certificates to seafarers who meet the conditions of sections 15 and 16 following application by means of the Danish Maritime Authority's electronic application form.

# Part 8 Entry into force

Section 18. This order shall enter into force on 1 January 2017.

Danish Maritime Authority, 15 December 2016

Per Sønderstrup / Malthe Møller Pedersen

Colorer 1		ject to the IGF Code	Colores 4
Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
	ing and proficiency	strating competence	competence
Contribute to the safe	Design and operational	Examination and assess-	Communications within
operation of a ship sub-	characteristics of ships	ment of evidence ob-	the area of responsibility
ject to the IGF Code.	subject to the IGF Code.	tained from one or more	are clear and effective.
	Basic knowledge of ships	of the following:	Operations related to
	subject to the IGF Code,	.1 approved in-service	ships subject to the IGF
	their fuel systems and fuel	experience;	Code are carried out in
	storage systems:	.2 approved training	accordance with accepted
	.1 fuels addressed by the	ship experience;	principles and procedures
	IGF Code;	.3 approved simulator	to ensure safety of opera-
	.2 types of fuel systems	training;	tions.
	subject to the IGF Code;	.4 approved training	
	.3 atmospheric, cryo-	programme.	
	genic 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, com-		
	pressed or cryogenic		
	storage;		
	.3 relief systems and		
	protection screens;		
	.4 basic bunkering opera-		
	tions 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 sub-		
	ject to the IGF Code,		
	including:		

Table A-V/3-1Specification of minimum standard of competence in basic training<br/>for ships subject to the IGF Code

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
-	ing and proficiency	strating competence	competence
	.1 properties and charac-		
	teristics;		
	.2 pressure and tempera-		
	ture, including vapour		
	pressure/temperature		
	relationship. Knowledge and under-		
	standing of safety re-		
	quirements and safety		
	management on board		
	ships subject to the IGF		
	Code.		
Take precautions to	Basic knowledge of the	Examination and assess-	Correctly identifies on a
prevent hazards on a	hazards associated with	ment of evidence ob-	Safety Data Sheet (SDS),
ship subject to the IGF	operations on ships sub-	tained from one or more	relevant hazards to the
Code.	ject to the IGF Code,	of the following:	ship and to personnel,
	including:	.1 approved in-service	and takes the appropriate
	.1 health hazards;	experience;	actions in accordance
	.2 environmental	.2 approved training	with established proce-
	hazards;	ship experience;	dures.
	.3 reactivity hazards;	.3 approved simulator	Identification and actions
	.4 corrosion hazards;	training;	on becoming aware of a
	.5 ignition, explosion and	.4 approved training	hazardous situation con-
	flammability hazards;	programme.	form to established pro-
	.6 sources of ignition;		cedures in line with best
	<ul><li>.7 electrostatic hazards;</li><li>.8 toxicity hazards;</li></ul>		practice.
	.9 vapour leaks and		
	clouds;		
	.10 extremely low temper-		
	atures;		
	.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;		
	<ul><li>.5 inhibition;</li><li>.6 measures to prevent</li></ul>		
	.6 measures to prevent ignition, fire and ex-		
	plosion;		
	.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).		
Apply occupational	Awareness of function of	Examination and assess-	Procedures and safe

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
-		strating competence	competence
health and safety pre- cautions and measures.	<ul> <li>ing and proficiency</li> <li>gas-measuring instruments and similar equipment: <ol> <li>gas testing;</li> <li>Proper use of specialized safety equipment and protective devices, in- cluding: <ol> <li>breathing apparatus;</li> <li>protective clothing;</li> <li>resuscitators;</li> <li>rescue and escape equipment.</li> </ol> </li> <li>Basic knowledge of safe working practices and procedures in accordance with legislation and in- dustry guidelines and personal shipboard safety relevant to ships subject to the IGF Code, including: <ol> <li>precautions to be taken before entering hazardous spaces and zones;</li> <li>precautions to be taken before and during repair and maintenance work;</li> <li>safety measures for hot and cold work.</li> </ol> </li> </ol></li></ul>	<ul> <li>strating competence</li> <li>ment of evidence obtained from one or more of the following: <ol> <li>approved in-service experience;</li> <li>approved training ship experience;</li> <li>approved simulator training;</li> <li>approved training programme.</li> </ol> </li> </ul>	competence working practices de- signed to safeguard per- sonnel and the ship are observed at all times. Appropriate safety and protective equipment is correctly used. First aid dos and don'ts.
Carry out firefighting operations on a ship subject to the IGF Code.	Safety Data Sheet (SDS). 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 dif- ferent fuels found on board ships subject to the IGF Code. Firefighting system opera- tions.	Practical exercises and instructions carried out under approved and fully realistic training con- ditions (such as the con- ditions on board the ship) and – when 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 identify- ing muster signals is appropriate to the indi- cated 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 pre- vailing circumstances and firefighting agents. The fire is extinguished using the relevant pro- cedures, techniques and

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
-	ing and proficiency	strating competence	competence
			fire-extinguishants.
Respond to emergencies.	Basic knowledge of emer- gency procedures, includ- ing emergency shutdown.	<ul> <li>Examination and assessment of evidence obtained from one or more of the following:</li> <li>.1 approved in-service experience;</li> <li>.2 approved training ship experience;</li> <li>.3 approved simulator training;</li> <li>.4 approved training programme.</li> </ul>	The type and impact of the emergency is promptly identified and the response action con- form to the emergency procedures and contin- gency plans.
Take precautions to prevent pollution of the environment from the release of fuels found on ships subject to the IGF Code.	<ul> <li>Basic knowledge of measures to be taken in the event of leak- age/spillage/venting of fuels from ships subject to the IGF Code, including the need to:</li> <li>.1 report relevant infor- mation to the respon- sible persons;</li> <li>.2 awareness of ship- board spill/leakage/venting response procedures;</li> <li>.3 awareness of appropri- ate personal protection when responding to a spill/leakage of fuels addressed by the IGF Code.</li> </ul>	Examination and assess- ment of evidence ob- tained 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 environ- ment are observed at all times.

Table A-V/3-2	Specification of minimum standard of competence
of advanc	ed training for ships subject to the IGF Code

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
Competence	ing and proficiency	strating competence	competence
Familiarity with physical	Basic knowledge and	Examination and assess-	Effective use is made of
and chemical properties	understanding of simple	ment of evidence ob-	information resources for
of fuels aboard ships	chemistry and physics and	tained from one or more	identification of proper-
subject to the IGF Code.	the relevant definitions	of the following:	ties and characteristics of
subject to the for code.	related to safe bunkering	.1 approved in-service	fuels addressed by the
	and use of fuels used on	experience;	IGF Code and their im-
	board ships subject to the	.2 approved training	pact on safety, environ-
	IGF Code, including:	ship experience;	mental protection and
	.1 the chemical structure	.3 approved simulator	ship operation.
	of different fuels used	training;	<u>r</u> - <u>r</u>
	on board ships subject	.4 approved training	
	to the IGF Code;	programme.	
	.2 the properties and	1 0	
	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;		
	.2.4boil-off and weather-		
	ing of cryogenic fuels;		
	.2.5 compression and ex-		
	pansion of gases;		
	.2.6critical pressure and		
	temperature of gases;		
	.2.7 flashpoint, upper and		
	lower flammable		
	limits, auto-ignition		
	temperature;		
	.2.8 saturated vapour pres-		
	sure/reference temper- ature;		
	.2.9 dewpoint and bubble		
	point;		
	.2.10 hydrate formation;		
	.2.11 combustion proper-		
	ties: heating values;		
	.2.12 methane		
	number/knocking;		
	.2.13 pollutant character-		
	istics of fuels ad-		
	dressed by the IGF		
	Code;		
	.3 the properties of single		
	liquids;		
	.4 the nature and proper-		
	ties of solutions;		
	.5 thermodynamic units;		
	.6 basic thermodynamic		

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
-	ing and proficiency	strating competence	competence
Operate controls of fuel related to propulsion plant and engineering systems and services and safety devices on board ships subject to the IGF Code.	<ul> <li>laws and diagrams;</li> <li>7 properties of materials;</li> <li>.8 effect of low temperature, including brittle fracture, for liquid cryogenic fuels.</li> <li>Understanding the information contained in a Safety Data Sheet (SDS) about fuels addressed by the IGF Code.</li> <li>Operating principles of marine power plants.</li> <li>Ships' auxiliary machinery.</li> <li>Knowledge of marine engineering terms.</li> </ul>	Examination and assess- ment of evidence ob- tained from one or more of the following: .1 approved in-service experience; .2 approved training ship experience; .3 approved simulator training; .4 approved training	Plant, auxiliary machin- ery and equipment is operated in accordance with technical specifica- tions and within safe operating limits at all times.
Ability to safely perform and monitor all opera- tions related to the fuels used on board ships subject to the IGF Code.	<ul> <li>Design and characteristics of ships subject to the IGF Code.</li> <li>Knowledge of ship design, systems, and equipment found on ships subject to the IGF Code, including: <ul> <li>1 fuel systems for different propulsion engines;</li> <li>2 general arrangement and construction;</li> <li>3 fuel storage systems on board ships subject to the IGF Code, in- cluding materials of construction and in- sulation;</li> <li>4 fuel-handling equip- ment and instrumenta- tions on board ships:</li> <li>4.1 fuel pumps and pump- ing arrangements;</li> <li>4.2 fuel pipelines;</li> <li>4.3 expansion devices;</li> <li>4.4 flame screens;</li> <li>4.5 temperature monitor- ing systems;</li> <li>4.7 tank pressure monitor-</li> </ul> </li> </ul>	<ul> <li>programme.</li> <li>Examination and assessment of evidence obtained from one or more of the following: <ol> <li>approved in-service experience;</li> <li>approved training ship experience;</li> <li>approved simulator training;</li> <li>approved training programme.</li> </ol> </li> </ul>	Communications are clear and understood. Successful ship opera- tions using fuels ad- dressed by the IGF Code are carried out in a safe manner, taking into ac- count 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 car- ried 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, understand-	Methods for demon-	Criteria for evaluating
	ing and proficiency	strating competence	competence
	systems;		
	.5 cryogenic fuel tanks		
	temperature and pres-		
	sure maintenance;		
	.6 fuel system atmos-		
	phere control systems		
	(inert gas, nitrogen),		
	including storage,		
	generation and distri-		
	bution;		
	.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;		
	.5 pressure build-up		
	units.		
	Knowledge of safe proce-		
	dures 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	General knowledge of	Examination and assess-	Fuel quality and quantity
bunkering, stowage and	ships subject to the IGF	ment of evidence ob-	is determined taking into
securing of the fuel on	Code.	tained from one or more	account the current con-
board ships subject to	Ability to use all data	of the following:	ditions and necessary
the IGF Code.	available on board related	.1 approved in-service	corrective safe measures
	to bunkering, storage and	experience;	are taken.
	securing of fuels ad-	.2 approved training	Procedures for monitor-
	dressed by the IGF Code.	ship experience;	ing safety systems to
	Ability to establish clear	.3 approved simulator	ensure that all alarms are
	and concise communica-	training;	detected promptly and
	tions between the ship and	.4 approved training	acted upon in accordance
	the terminal, truck or the	programme.	with established proce-
	bunker supply ship.		dures.
	Knowledge of safety and		Operations are planned
	emergency procedures for		and carried out in accord-
	operation of machinery,		ance with fuel transfer
	fuel- and control systems for ships subject to the		manuals and procedures
	IGF Code.		to ensure safety of opera-
	IOF Code.	1	tions and avoid spill

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
	ing and proficiency	strating competence	competence
	Proficiency in the opera-		damages and pollution of
	tion of bunkering systems		the environment.
	on board ships subject to		Personnel are allocated
	the IGF Code, including:		duties and informed of
	.1 bunkering procedures;		procedures and standards
	.2 emergency proce-		of work to be followed, in
	dures;		a manner appropriate to
	.3 ship-shore/ship-ship		the individuals concerned
	interface;		and in accordance with
	.4 prevention of rollover.		safe working procedures.
	Proficiency to perform		sale working procedures.
	fuel-system measurements		
	and calculations, includ-		
	ing:		
	.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 concur-		
	rent with other onboard		
	operations, both in port		
	and at sea.		
Take precautions to	Knowledge of the effects	Examination and assess-	Procedures designed to
prevent pollution of the	of pollution on human and	ment of evidence ob-	safeguard the environ-
environment from the	environment.	tained from one or more	ment are observed at all
release of fuels from	Knowledge of measures to	of the following:	times.
ships subject to the IGF	be taken in the event of	.1 approved in-service	
Code.	spillage/leakage/venting.	experience;	
		.2 approved training	
		ship experience;	
		.3 approved simulator	
		training;	
		.4 approved training	
		programme.	
Monitor and control	Knowledge and under-	Examination and assess-	The handling of fuels on
compliance with legisla-	standing of relevant provi-	ment of evidence ob-	board ships subject to the
tive requirements.	sions of the International	tained from one or more	IGF Code complies with
	Convention for the Pre-	of the following:	relevant IMO instruments
	vention of Pollution from	.1 approved in-service	and established industrial
	Ships (MARPOL), as	experience;	standards and codes of
	amended and other rele-	.2 approved training	safe working practices.
	vant IMO instruments,	ship experience;	Operations are planned
	industry guidelines and	.3 approved simulator	and performed in con-
	port regulations as com-	training;	formity with approved
	monly applied.	.4 approved training	procedures and legislative
	Proficiency in the use of	programme.	requirements.
	the IGF Code and related	programme.	requirements.
	documents.		
	documento.		
Take precautions to	Knowledge and under-	Examination and assess-	Relevant hazards to the

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
	ing and proficiency	strating competence	competence
	and control measures	tained from one or more	associated with opera-
	associated with fuel	of the following:	tions on board ships sub-
	system operations on	.1 approved in-service	ject to the IGF Code are
	board ships subject to the	experience;	correctly identified and
	IGF Code, including:	.2 approved training	proper control measures
	.1 flammability;	ship experience;	are taken.
	.2 explosion;	.3 approved simulator	Use of flammable and
	.3 toxicity;	training;	toxic gas-detection de-
	.4 reactivity;	.4 approved training	vices are in accordance
	.5 corrosivity;	programme.	with manuals and good
	.6 health hazards;	programme.	practice.
	.7 inert gas composition;		praetice.
	.8 electrostatic hazards;		
	.9 pressurized gases;		
	.10 low temperature.		
	Proficiency to calibrate		
	and use monitoring and		
	•		
	fuel detection systems,		
	instruments and equipment		
	on board ships subject to the IGF Code.		
	Knowledge and under-		
	standing of dangers of		
	non-compliance with		
	relevant rules/regulations.		
	Knowledge and under-		
	standing of risk assess-		
	ment method analysis on		
	board ships subject to the		
	IGF Code.		
	Ability to elaborate and		
	develop risk analysis re-		
	lated 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	Proper use of safety	Examination and assess-	Appropriate safety and
health and safety pre-	equipment and protective	ment of evidence ob-	protective equipment is
cautions and measures	devices, including:	tained from one or more	correctly used.
on board a ship subject	.1 breathing apparatus	of the following:	Procedures designed to
to the IGF Code.	and evacuating	.1 approved in-service	safeguard personnel and
	equipment;	experience;	the ship are observed at
	.2 protective clothing and	.2 approved training	all times.
	equipment;	ship experience;	Working practices are in
	.3 resuscitators;	.3 approved simulator	accordance with legisla-
	.4 rescue and escape	training;	tive requirements, codes
	equipment.	.4 approved training	of practice, permits to
	Knowledge of safe work-	programme.	work and environmental
	Ishowieuge of sale work-	programme.	work and environmental

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understand-	Methods for demon-	Criteria for evaluating
	ing and proficiency	strating competence	competence
	ing practices and proce-		concerns.
	dures in accordance with		First aid dos and don'ts.
	legislation and industry		
	guidelines and personal		
	shipboard safety, includ-		
	ing:		
	.1 precautions to be		
	taken before, during		
	and after repair and		
	maintenance work on		
	fuel systems addressed		
	in the IGF Code;		
	.2 electrical safety (refer-		
	ence to IEC 600079-		
	17);		
	.3 ship/shore safety		
	checklist.		
	Basic knowledge of first		
	aid with reference to a		
	Safety Data Sheet (SDS)		
	for fuels addressed by the		
	IGF Code.		
Knowledge of the pre-	Knowledge of the methods	Examination and assess-	The type and scale of the
vention, control and	and firefighting appliances	ment of evidence ob-	problem is promptly
firefighting and ex-	to detect, control and	tained from one or more	identified, and initial
tinguishing systems on	extinguish fires of fuels	of the following:	actions conform with the
board ships subject to	addressed by the IGF	.1 approved in-service	emergency procedures for
the IGF Code.	Code.	experience;	fuels addressed by the
		.2 approved training	IGF Code.
		ship experience; .3 approved simulator	Evacuation, emergency shutdown and isolation
		.3 approved simulator training;	procedures are appropri-
		.4 approved training	ate to the fuels addressed
			by the IGF Code.
		programme.	by the IOF Code.

Certificate of proficiency in basic training for service on ships subject to the IGF Code

L	
	træning for søfarende om bord på skibe omfattet af IGF-koden cy in basic training for service on ships subject to the IGF Code
BEVIS	UDSTEDT EFTER BESTEMMELSERNE I
DEN INTERNATION	ALE KONVENTION OM UDDANNELSE AF SØFARENDE,
OM SØNÆF	AING OG OM VAGTHOLD, 1978, SOM ÆNDRET
CERTIFICATE ISSUED UND	ER THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING,
CERTIFICATION AN	D WATCHKEEPING FOR SEAFARERS, 1978, AS AMENDED
Det attesteres herved, at This is to certify that	
CPR. NR. (ID No.)	
er fundet kvalificeret i overensst	emmelse med bestemmelserne i reglement
	accordance with the provisions of regulation
	Section A-V/3 paragraph 1
	ændret, til tjeneste om bord skibe omfattet af IGF-koden nded, service on ships subject to the IGF Code.
Ihændehaverens fødselsdato Date of birth of the holder of the	certificate
Udstedt dato	
Issued date	Bemyndigede bevisudsteders navn og underskrift
gyldigt til	Signature and name of person authorized to issue certificate
expiry date	

Certificate of proficiency in advanced training for service on ships subject to the IGF Code

Bevis for l	edelse af operationer på skibe omfattet af IGF-koden
Certificate of proficien	cy in advanced training for service on ships subject to the IGF Code
BEVIS UDSTEDT EFTER BESTEMMELSERNE I	
DEN INTERNATIONALE KONVENTION OM UDDANNELSE AF SØFARENDE,	
OM SØNÆRING OG OM VAGTHOLD, 1978, SOM ÆNDRET	
CERTIFICATE ISSUED UN	DER THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING,
CERTIFICATION A	ND WATCHKEEPING FOR SEAFARERS, 1978, AS AMENDED
Det attesteres herved, at This is to certify that	
CPR. NR. (ID No.)	
er fundet kvalificeret i overensstemmelse med bestemmelserne i reglement has been found duly qualified in accordance with the provisions of regulation	
	Section A-V/3 paragraph 2
af ovennævnte konvention, som ændret, til tjeneste om bord skibe omfattet af IGF-koden of the above Convention, as amended, service on ships subject to the IGF Code.	
Ihændehaverens fødselsdato Date of birth of the holder of the certificate	
Udstedt dato	
Issued date	Bemyndigede bevisudsteders navn og underskrift Signature and name of person authorized to issue certificate
gyldigt til	Signature and name of person authorized to issue certificate
expiry date	