Order no. 762 of 11 June 2018 issued by the Danish Maritime Authority

Order on special training and competence requirements for personnel on ships operating in polar waters

In pursuance of section 18(1)(i), section 20(3), second sentence, section 24b, section 25b(1) and (2), and section 27(3) of the Danish Act on the manning of ships (*lov om skibes besætning*), see Consolidated Act no. 74 of 17 January 2014, and following consultation with the shipowners' and seafarers' organisations, the following provisions are laid down as authorised under section 1(1)(ii) of Order no. 744 of 24 June 2013 on the transfer of certain powers to the Danish Maritime Authority and on the right of appeal, etc.:

Purpose and scope of application

Section 1. This Order lays down the training and competence requirements for masters, officers and other personnel forming part of a navigational watch on board ships operating in polar waters, see the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW Convention), Regulation V/4.

Section 2. This Order applies to seafarers on ships covered by the Polar Code, see Part XIV on safety measures for ships operating in polar waters of Order no. 1512 of 8 December 2016 on B Notices from the Danish Maritime Authority, the construction and equipment, etc. of ships, as amended by Order no. 1188 of 7 November 2017.

Competence and certificates

Section 3. Masters, chief mates and officers forming part of a navigational watch on board ships operating in polar waters shall hold a valid certificate of proficiency in basic training for ships operating in polar waters as required under the Polar Code, see section 2, and shall, in order to be issued with the certificate, have completed approved training in accordance with Section A-V/4, paragraph 1, of the STCW Code, as set out in Annex 1.

Section 4. Masters and chief mates on ships operating in polar waters shall hold a valid certificate of proficiency in advanced training for service on ships operating in polar waters as required under the Polar Code, see section 2, and, in order to be issued with the certificate, they shall:

- (i) have completed basic training under section 3;
- (ii) have at least two months of seagoing service forming part of a navigational watch at the management level or at the operational level within polar waters, or equivalent approved seagoing service, see section 12; and
- (iii) have completed approved training in accordance with Section A-V/4, paragraph 2, of the STCW Code, as set out in Annex 2.

Validity and renewal of certificates

Section 5. Certificates issued pursuant to section 3 or section 4 are valid for a period of five years.

Subsection 2. Applicants for renewal of a certificate shall:

- (i) have approved seagoing service in a capacity for which a certificate under this Order is required for a period of at least two months within the previous five years; or
- (ii) have completed approved training, see section 3 or section 4.

Subsection 3. Applications for renewal must be submitted to the Danish Maritime Authority using an electronic application form.

Subsection 4. Applications for renewal of a certificate of proficiency, see subsection (1), may be submitted before the certificate expires.

Training providers and instructors' qualifications

Section 6. In order to provide training and issue certificates of proficiency, the training providers and training programmes under sections 3 and 4 must be approved in accordance with the Danish Maritime Authority's Order on approval and quality assurance, etc. of maritime training programmes.

Section 7. Training providers shall ensure that the instructors have the requisite qualifications to teach the courses concerned. This includes both professional qualifications and qualifications to provide instruction and training.

Section 8. Based on the training objectives set out in Annexes 1 and 2, training providers shall perform the detailed planning, including duration, taking into consideration the participants' backgrounds.

Section 9. Training programmes and examinations may be organised to include the use of digital media.

Issue and registration of certificates

Section 10. Training providers shall issue a certificate of proficiency to seafarers having completed basic training for service on ships operating in polar waters.

Subsection 2. The certificate is valid for five years from the issue date and must be drawn up as shown in Annex 3.

Section 11. Training providers shall issue a certificate of proficiency to seafarers having completed advanced training for service on ships operating in polar waters, provided that the seafarer can document having at least two months of approved seagoing service forming part of a navigational watch, either at the management level or at the operational level, within polar waters or equivalent approved seagoing service.

Subsection 2. The certificate is valid for five years from the issue date and must be drawn up as shown in Annex 4.

Section 12. When issuing a certificate of proficiency, training providers shall verify the documentation of seagoing service where approved seagoing service in polar waters is required under this Order.

Subsection 2. The Danish Maritime Authority shall determine whether the requirement of equivalent approved seagoing service is met in cases where the seagoing service was not completed in polar waters.

Section 13. Training providers shall register the issue of course certificates. The registration must be kept for five years and contain information on the issue date, and the name and date of birth of the seafarer.

Subsection 2. Training providers shall report completed courses to the Danish Maritime Authority using its digital reporting system.

Section 14. A fee is charged for applications to the Danish Maritime Authority for the issue or renewal of certificates, or copies of certificates, see the Danish Maritime Authority's fee rates.

Penalty provisions

Section 15. Contravention of section 3, section 4 and section 5(1) of this Order is punishable with a fine.

Subsection 2. Criminal liability may be imposed on companies, etc. (legal persons) under the rules of Part 5 of the Danish Criminal Code (*straffeloven*).

Subsection 3. When imposing criminal liability under subsection (2), persons who are hired to perform work on board the ship by others than the shipowner are also considered to be associated with the shipowner. If a document of compliance has been issued in accordance with the International Safety Management Code or if a certificate has been issued in accordance with the Maritime Labour Convention to another organisation or person, the master of the ship and the seafarers are also considered to be associated with the one to whom the document has been issued.

Entry into force and interim provisions

Section 16. This Order enters into force on 1 July 2018.

Section 17. Until 1 July 2020, seafarers having formed part of a navigational watch in polar waters before 1 July 2018 may satisfy the requirements set out in section 3 by documenting:

- (i) at least three months of approved seagoing service in the deck department in the period from 1 July 2013 to 1 July 2018, at the operational level or at the management level, on ships operating in polar waters or equivalent approved seagoing service; or
- (ii) completed training in accordance with Section B-V/g of the STCW Code.

Subsection 2. Until 1 July 2020, seafarers having formed part of a navigational watch in polar waters before 1 July 2018 may satisfy the requirements set out in section 4 by documenting:

- (i) at least three months of approved seagoing service in the deck department in the period from 1 July 2013 to 1 July 2018, at the management level, on ships operating in polar waters or equivalent approved seagoing service; or
- (ii) completed training in accordance with Section B-V/g of the STCW Code combined with at least two months of approved seagoing service in the deck department in the period from July 2013 to 1 July 2018, at the management level, on ships operating in polar waters or equivalent approved seagoing service.

Subsection 3. The Danish Maritime Authority shall determine whether the requirement of equivalent approved seagoing service is satisfied.

Subsection 4. Seafarers wishing to acquire a certificate, see subsection (1) or (2) shall submit an application to the Danish Maritime Authority by using the Danish Maritime Authority's system for digital applications for the issue of certificates.

Danish Maritime Authority, 11 June 2018

RASMUS HØY THOMSEN

Table A-V/4-1

The training is to qualify participants to form part of a navigational watch on ships operating in polar areas and must as a minimum include the competences listed in the table below.

Specification of minimum standard of competence in basic training for ships operating in polar waters

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Contribute to safe operation of vessels operating in polar waters	 Basic knowledge of ice characteristics and areas where different types of ice can be expected in the area of operation: 1 ice physics, terms, formation, growth, ageing and stage of melt 2 ice types and concentrations 3 ice pressure and distribution 4 friction from snow covered ice 5 implications of spray-icing; danger of icing up; precautions to avoid icing up and options during icing up 6 ice regimes in different regions; significant differences between the Arctic and the Antarctic, first year and multiyear ice, sea ice and land ice 7 use of ice imagery to recognize consequences of rapid change in ice and weather conditions 8 knowledge of ice blink and water sky 9 knowledge of differential movement of icebergs and pack ice 	competenceExamination and assessment of evidence obtained from one or more of the following:.1approved in-service experience.2approved training ship experience.3approved simulator training, where appropriate.4approved training programme	competenceIdentification of ice properties and their characteristics of relevance for safe vessel operationInformation obtained from ice information and publications is interpreted correctly and properly appliedUse of visible and infrared satellite imagesUse of egg chartsCoordination of meteorological and oceanographic data with ice dataMeasurements and observations of weather and ice conditions are accurate and appropriate for safe passage planning
	.10 knowledge of tides and currents in ice		

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
	.11 knowledge of effect of wind and current on ice		
	Basic knowledge of vessel performance in ice and low air temperature: .1 vessel characteristics .2 vessel types, hull designs	Examination and assessment of evidence obtained from one or more of the following: .1 approved in- service experience	Identification of vessel characteristics and limitations under different ice conditions and cold environmental impact
	 .3 engineering requirements for operating in ice .4 Ice strengthening requirements .5 limitations of ice-classes .6 winterization and preparedness of vessel, including deck and engine .7 Iow-temperature system performance .8 equipment and machinery limitation in ice condition and low air temperature .9 monitoring of ice pressure on hull .10 sea suction, water intake, superstructure insulation 	 .2 approved training ship experience .3 approved simulator training, where appropriate .4 approved training programme 	Procedures are made for risk assessment before entering ice Awareness of fresh water ballast freezing in ballast tanks Actions are carried out in accordance with accepted principles and procedures to prepare the vessel and the crew for operations in ice and low air temperature Communications are clear, concise and effective at all times
	Basic knowledge and ability	Examination and	Use Polar Code and
	 to operate and manoeuvre a vessel in ice: .1 safe speed in the presence of ice and icebergs .2 ballast tank monitoring 	evidence obtained from one or more of the following:	Polar Water Operations Manual to correctly determine the recommended procedures to load/unload cargo and/or embark/disembark passengers in low

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
	.3 cargo operations in polar waters	.1 approved in-service experience	temperatures, monitor ballast water for icing, monitor
	.4 awareness of engine loads and cooling problems	.2 approved training ship experience	engine temperatures, anchor watch
	.5 safety procedures during ice transit	.3 approved simulator training, where appropriate	transit near ice
		.4 approved training programme	analysis of information from radar is in accordance with lookout procedures with special caution regarding identification of dangerous ice features
			Information obtained from navigational charts, including electronic charts, and publications is relevant, assessed, interpreted correctly and properly applied
			The primary method of position fixing is frequent and the most appropriate for the prevailing conditions and routing through ice
			Performance checks and tests of navigation and communication systems comply with recommendations for high latitude and low air temperature operation

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
Monitor and ensure compliance with legislative requirements	 Basic knowledge of regulatory considerations: .1 Antarctic Treaty and the Polar Code .2 accident reports concerning vessels in polar waters .3 IMO standards for operation in remote areas 	 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, where appropriate .4 approved training 	Locate and apply relevant parts of the Polar Water Operations Manual Communication is in accordance with local/regional and international standard procedures Legislative requirements related to relevant regulations, codes and practices are identified
Apply safe working practices, respond to emergencies	 Basic knowledge of crew preparation, working conditions and safety: .1 recognize limitations of search and rescue readiness and responsibility, including sea area A4 and its SAR communication facility limitation .2 awareness of contingency planning .3 how to establish and implement safe working procedures for crew specific to polar environments such as low temperatures, ice-covered surfaces, personal protective equipment, use of buddy system, and working time limitations .4 recognize dangers when crews are exposed to low temperatures 	programmeExamination and assessment of evidence obtained from one or more of the following:.1approved in- service experience.2approved training ship experience.3approved simulator training, where appropriate.4approved training programme	Identification and initial actions on becoming aware of hazardous situations for vessel and individual crew members Actions are carried out in accordance with Polar Water Operations Manual, accepted principles and procedures to ensure safety of operations and to avoid pollution of the marine environment Safe working practices are observed and appropriate safety and protective equipment is correctly used at all times Response actions are in accordance with established plans and are appropriate to the situation and nature of the emergency

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding and proficiency	Methods for demonstrating competence	Criteria for evaluating competence
	.5 human factors including cold fatigue, medical-first aid aspects, crew welfare		Correctly identifies and applies legislative requirements related to relevant regulations, codes and practices
	.6 survival requirements including the use of personal survival equipment and group survival equipment		Appropriate safety and protective equipment is correctly used
	.7 awareness of the most common hull and equipment damages and how to avoid these		Defects and damages are detected and properly reported
	.8 superstructure-deck icing, including effect on stability and trim		
	.9 prevention and removal of ice including the factors of accretion		
	.10 recognize fatigue problems due to noise and vibrations		
	.11 identify need for extra resources, such as bunker, food and extra clothing		

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge, understanding	Methods for	Criteria for
	and proficiency	demonstrating	evaluating
			competence
Ensure	Basic knowledge of	Examination and	Legislative
with pollution-	environmental factors	evidence obtained	to relevant
prevention	and regulations.	from one or more of	regulations, codes
requirements	.1 identify particularly	the following:	and practices are
and prevent	sensitive sea areas		identified
bazarde	regarding discharge	.1 approved in-	Correctly
11020103		service experience	identify/select the
	.2 identify areas where	2 enpressed training	limitations on vessel
	shipping is prohibited	.2 approved training	discharges
	or should be avoided	ship experience	contained in the
			Polar Code
	.3 special areas defined	3 approved simulator	Correctly apply Polar
		training, where	Water Operations
	4 recognize limitations of	appropriate	Manual/Waste
	oil-spill equipment		Management Plan to
	oli-spill equipment		on vessel
	.5 plan for coping with	.4 approved training	discharges and
	increased volumes of	programme	plans for storing
	garbage, bilge water,		waste
	sewage, etc.		Identify references
			that provide details
	.6 lack of infrastructure		of areas to be
			avoided, such as
	.7 oil spill and pollution in		wildlife refuges,
	ice, including		ecological heritage
	consequences		parks, migratory
			(MARPOL, Antarctic
			Treaty, etc.)
			nuentity factors that
			to manage waste
			stream during polar
			voyages

Table A-V/4-2

The training is to provide participants with competence in advanced training for service on ships operating in polar areas and must as a minimum include the competences listed in the table below.

Specification of minimum standard of competence in advanced training for ships operating in polar waters

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge,	Methods for	Criteria for
	understanding and	demonstrating	evaluating
	proficiency	competence	competence
Plan and	Knowledge of voyage	Examination and	The equipment,
conduct a	planning and reporting:	assessment of evidence	charts and nautical
voyage in polar	1 information sources	obtained from one of	for the veyage are
waters	.1 Information sources	more of the following.	onumerated and
	2 reporting regimes in	1 approved in-service	appropriate to the
	polar waters	experience	safe conduct of the
	P		vovage
	.3 development of safe	.2 approved training	
	routeing and passage	ship experience	The reasons for the
	planning to avoid ice		planned route are
	where possible	.3 approved simulator	supported by facts
		training, where	obtained from
	.4 ability to recognize the	appropriate	relevant sources and
	hudrographic	1 approved training	publications,
	information and charts	programme	limitations of
	in polar regions and	[communication and
	whether the		navigational systems
	information is suitable		
	for safe navigation		Voyage plan
			correctly identified
	.5 passage planning		relevant polar
	deviation and		regulatory regimes
	modification for		and need for
	dynamic ice		ice-pilotage and/or
	Conditions		ICebreaker
	Knowledge of		assistance
	equipment limitations:		All potential
			navigational hazards
	.1 understand and		are accurately
	identify hazards		identified
	associated with		
	limited terrestrial		Positions, courses,
	navigational aids in		distances and time
	polar regions		calculations are
	2 understand and		correct within
	.2 UNUERSIANU ANU recognize high		accepted accuracy
	latitude errors on		navigational
	compasses		equipment
	.3 understand and		
	identify limitations		
	in discrimination		

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge,	Methods for	Criteria for
	understanding and	demonstrating	evaluating
	proficiency	competence	competence
	of radar targets		
	and ice features		
	in ice-clutter		
	4 understand and		
	limitations of		
	electronic		
	positioning systems		
	at high latitude		
	.5 understand and		
	recognize limitations		
	in nautical charts		
	descriptions		
	6 understand and		
	recognize limitations		
	in communication		
	systems		
Manage the safe	Knowledge and ability to	Examination and	All decisions
operation of	operate and manoeuvre	assessment of evidence	concerning
vessels	a vessel in ice:	obtained from one or	navigating in ice are
operating in		more of the following:	based on a proper
polar waters	.1 preparation and risk		assessment of the
	assessment before	.1 approved in-service	snip's manoeuvring
	including presence of	experience	characteristics and
	icebergs and taking	2 approved training	the forces to be
	into account wind	ship experience	expected while
	darkness, swell, fog		navigating within
	and pressure ice	.3 approved simulator	polar waters
		training, where	
	.2 conduct	appropriate	Demonstrate
	communications with		communication
	other vessels in the	brogramme	routeing, plot and
	area and with Rescue		commence voyage
	Coordination Centres		through ice
	.3 understand and		All potential ice
	describe the		hazards are
	conditions for the safe		correctly identified
	entry and exit to and		
	trom ice or open		All decisions
	water, such as leads		concerning berthing
	or cracks, avoiding		anchoring, cargo
			and Dallast
	conditions and		hased on a proper
			based on a proper

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge,	Methods for	Criteria for
-	understanding and	demonstrating	evaluating
	proficiency	competence	competence
	maintaining safe		assessment of the
	distance to icebergs		ship's manoeuvring
			and engine
			characteristics and
	.4 understand and		the forces to be
			expected and in
	procedures including		Polar Code
	double and single		quidelines and
	ramming passage		applicable
			international
	.5 recognize and		agreements
	determine the need		5
	for bridge watch		Safely demonstrate
	team augmentation		progression of a
	based upon		vessel through ice,
	environmental		manoeuvring vessel
	equipment and		through moderate
			(range of 1/10
			(range or 1/10 to 5/10)
	.6 recognize the		10 0/10/
	presentations of the		Safely demonstrate
	various ice		progression of a
	conditions as they		vessel through ice,
	appear on radar		manoeuvring vessel
	7 understand		through dense ice
	icebreaker convov		concentration (range
	terminology, and		
	communications, and		Operations are
	take icebreaker		planned and carried
	direction and move in		out in accordance
	convoy		rules and procedures
			to ensure safety of
	.8 understand methods		operation and to
	to avoid besetment		avoid pollution of the
	vessel and		
	consequences of		Safety of
	besetment		navigation is
			maintained
	.9 understand towing		through navigation
	and rescue in ice,		sinallegy and
	including risks		ship's speed and
	associated with		heading through
	operation		different types of
	10 handling shin in		ice
	various ice		
	concentration and		

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge,	Methods for	Criteria for
	understanding and	demonstrating	evaluating
Column 1 Competence	Column 2 Knowledge, understanding and proficiency coverage, including risks associated with navigation in ice, e.g. avoid turning and backing simultaneously .11 use of different type of propulsion and rudder systems, including limitations to avoid damage when operating in ice .12 use of heeling and trim systems, hazards in connection with ballast and trim in relation with ice .13 docking and undocking in ice-covered waters, including hazards associated with operation and the various techniques to safely dock and undock in ice-covered waters .14 anchoring in ice, including the dangers to anchoring system – ice accretion to hawse pipe and ground tackle .15 recognize conditions which impact polar	Column 3 Methods for demonstrating competence	Column 4 Criteria for evaluating competence Actions are understood to permit use of anchoring system in cold temperatures Actions are carried out in accordance with accepted principles and procedures to prepare for icebreaker towing, including notch towing
	.15 recognize conditions which impact polar visibility and may give indication of local ice and water conditions, including sea smoke, water sky, ice blink and refraction		
1			

Column 1	Column 2	Column 3	Column 4
Competence	Knowledge,	Methods for	Criteria for
	understanding and	demonstrating	evaluating
	proficiency	competence	competence
Maintain safety of the ship's crew and passengers and the operational condition of life-saving, fire- fighting and other safety systems	 <i>Knowledge of safety:</i> .1 understand the procedures and techniques for abandoning the ship and survival on ice and in ice-covered waters .2 recognize limitations of fire-fighting systems and life-saving appliances due to low air temperatures .3 understand unique concerns in conducting emergency drills in ice and low temperatures .4 understand unique concerns in conducting emergency response in ice and low air and water temperatures 	 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, where appropriate .4 approved training programme 	Response measures are in accordance with established plans and procedures, and are appropriate to the situation and nature of the emergency

Bevis i grundlæggende tjenes	ste om bord i skibe omfattet af polarkoden	
Certificate of proficiency in basic tra	ining for service on ships operating in polar waters	
BEVIS UDSTEDT EFTER BESTEMMELSERNE I I SØFARENDE, OM SØNÆRING	DEN INTERNATIONALE KONVENTION OM UDDANNELSE AF G OG OM VAGTHOLD, 1978, SOM ÆNDRET	
CERTIFICATE ISSUED UNDER THE PROVISIONS TRAINING, CERTIFICATION AND WA	5 OF THE INTERNATIONAL CONVENTION ON STANDARDS OF TCHKEEPING FOR SEAFARERS, 1978, AS AMENDED	
Det attesteres herved, at This is to certify that		
CPR. NR. (ID-No.)		
er fundet kvalificeret i overensstemmelse med k has been found duly qualified in accordance with	bestemmelserne i reglement. h the provisions of regulation.	
V	/4, paragraph 2	
af ovennævnte konvention, som ændret, til tjeneste om bord skibe omfattet af polarkoden. of the above Convention, as amended, for service on ships subject to the Polar 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 Expiry date		

Bevis i ledelse af operationer på skibe omfattet af polarkoden	
Certificate of proficiency in advanc	ed training for service on ships operating in polar waters
BEVIS UDSTEDT EFTER BESTEMMELSERNE I DEN INTERNATIONALE KONVENTION OM UDDANNELSE AF SØFARENDE, OM SØNÆRING OG OM VAGTHOLD, 1978, SOM ÆNDRET	
CERTIFICATE ISSUED UNDER THE PROVISI TRAINING, CERTIFICATION AND	IONS OF THE INTERNATIONAL CONVENTION ON STANDARDS OF 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.	
	V/4, paragraph 4
af ovennævnte konvention, som ændret, til tieneste om bord skibe omfattet af polarkoden.	
of the above Convention, as amended, for service on ships subject to the Polar Code.	
Iller and the second field all dates	
Inændenaverens fødselsdato	
Udstedt dato	
Issued date Be	emyndigede bevisudsteders navn og underskrift
Sig	gnature and name of person authorized to issue certificate
Gyiuigi III Exniry date	
