



SUB-COMMITTEE ON STANDARDS OF
TRAINING AND WATCHKEEPING
30th session
Agenda item 8

STW 30/8
14 October 1998
Original: ENGLISH

DEVELOPMENT OF A CODE ON POLAR NAVIGATION

Note by the Secretariat

SUMMARY

Executive summary:	This document identifies those parts of the proposed Code on polar navigation falling under the purview of the Sub-Committee
Action to be taken:	Paragraph 4
Related documents:	MSC 69/22, DE 41/17 and DE 41/WP.7, annex 1

1 The Maritime Safety Committee, at its sixty-ninth session, endorsed the request of DE 41 (MSC 69/22 paragraph 20.75) to include the item "Development of a code on polar navigation", in the provisional agenda for STW 30.

2 The DE Sub-Committee agreed to refer the relevant parts of the draft Code to the appropriate IMO bodies for them to provide directly to the DE Sub-Committee, at its forty-third session, their comments on the different parts of the Code, as identified in the table at annex, as well as on the Code in general, if deemed appropriate.

3 The relevant extracts of the proposed " Code on polar navigation" are given in the appendix to this document.

Action requested of the Sub-Committee

4 The Sub-Committee is invited to note the above information and take action as appropriate.

For reasons of economy, this document is printed in a limited number. Delegates are kindly asked to bring their copies to meetings and not to request additional copies.

ANNEX

**PARTS OF THE DRAFT POLAR NAVIGATION CODE FALLING UNDER
THE PURVIEW OF THE STW SUB-COMMITTEE**

Headings	Paragraphs
Preamble	
Guide	
Chapter 1	1.4
Chapter 2	
Chapter 3	
Chapter 4	
Chapter 5	
Chapter 6	
Chapter 7	
Chapter 8	
Chapter 9	
Chapter 10	
Chapter 11	
Chapter 12	
Chapter 13	
Chapter 14	all
Chapter 15	all
Chapter 16	16.1
Chapter 17	
Annex 1	
Annex 2	
Annex 3	

APPENDIX

EXTRACTS OF "THE CODE ON POLAR NAVIGATION"

Chapter 1

1.4 Ice Navigator

1.4.1 All ships other than those in Ice Free Water should carry at least one Ice Navigator certified in accordance with Chapter 15.

1.4.2 Companies should ensure that continuous monitoring of ice conditions by an Ice Navigator or a level 1 watchkeeper is available at all times while the ship is underway and making way in the presence of ice.

1.4.3 The Master may be one of the qualified individuals named in 1.4.2; however, on board tankers and passenger ships, the Master should not stand a regular watch while operating in Polar Waters.

1.4.4 The Administration, Port, and Coastal State as appropriate should accept as satisfactory evidence of training, experience and qualification, International Ice Navigator certificates issued by any State which is a signatory to the International Convention on Standards of Training, Certification, and Watchkeeping (STCW).

Chapter 14

OPERATIONAL STANDARDS

DIVISION I - GENERAL

14.1 Documentation

14.1.1 All ships operating in Polar Waters should carry on board at all times a current document of compliance (Polar Class ships only), Operating Manual, Training Manual and valid certificates for all Ice Navigators on board the ship.

14.2 Ship Operational Control

14.2.1 The ship should not be intentionally operated outside the worst intended conditions and limitations.

14.2.2 Ships navigating in Polar Waters should make a daily report to the Administration giving the ship's position and its condition. The Administration may direct a ship in these waters to proceed to any place or to take any action as may be justified by ice or weather conditions or by the condition of the ship.

14.2.3 In Polar Waters where coastal states, port states or Antarctic Authorities exercise rights of control under international law with regard to the high seas, ships should make a daily report to that state and act according to its direction.

14.3 Operating and Training Manuals

Operating Manual

14.3.1 The Operating Manual should contain at least the following information on issues directly related to operations in Polar Waters:

Normal Operation

- .1 principal particulars of the ship;
- .2 loading procedures and limitations including any applicable prohibitions against carrying pollutants in tanks and compartments against the hull envelope, maximum operational weight, position of centre of gravity and distribution of load necessary for operation in Polar Waters;
- .3 acknowledgment of changes in standard operating procedures for radio equipment and navigational aids applicable to polar operations;
- .4 information regarding the handling of the ship as determined in accordance with chapter 17 of this Code (Environmental Protection and Damage Control);
- .5 maximum towing speeds and towing loads where applicable;

Risk Management

- .6 procedures for checking the integrity of hull structure;
- .7 description and operation of fire detection and fire-extinguishing equipment in a polar environment; and

For Polar Class ships, the Operating Manual should include the following supplementary information, in clearly defined chapters specified by the Administration:

- .8 operating limitations for the ship and essential systems in anticipated ice conditions and temperatures;
- .9 details arising from the standards of chapter 3 of this Code (Subdivision and Stability) likely to be of direct practical use to the crew in an emergency;

- .10 passage planning procedures accounting for anticipated ice conditions;
- .11 deviations in standard operating procedures associated with operation of propulsion and auxiliary machinery systems, remote control and warning systems and electronic and electrical systems; made necessary by operations in Polar Waters;
- .12 deviations in standard damage control procedures made necessary by operations in Polar Waters; and
- .13 evacuation procedures into water, onto ice, or into a combination of the two, with due regard to chapter 11 of the Code.

14.3.2 Where a ship does not normally operate in Polar Waters, but makes an occasional voyage there, the standards of 14.3.1 may be met by providing on board, at the Conning Position, a supplementary manual specified by the Administration, the Port and/or the Coastal State. The Master should verify to the Coastal or Port State that all watchkeepers have read and understood this manual prior to entry into Polar Waters.

14.3.3 Respecting information on machinery or system failures, guidance should take into account the results of any risk or failure analysis reports developed during the ship design.

Training Manual

14.3.4 The Training Manual should cover all aspects of ship operation in Polar Waters listed below plus other related information considered necessary by the Administration.

- .1 Summary of International Code of Safety for Ships Operating in Polar Waters;
- .2 Ice Recognition;
- .3 Navigation in Ice; and
- .4 Escorted Operation.

Instructions for drills and emergency instructions as detailed in 14.4 should be incorporated as annexes to the Manual.

14.3.5 The Company should ensure that any additional documentation referenced in the Training Manual and required to provide a full understanding of its contents is on board the ship for all operations in Polar Waters.

14.4 Drills and Emergency Instructions

14.4.1 On board instruction and operation of the ship's evacuation, fire and damage control appliances and systems should include appropriate cross training of crew members with appropriate emphasis to changes to standard procedure made necessary by polar operations.

14.4.2 Emergency instructions including a general diagram of the ship showing the location of all exits, routes of evacuation, emergency equipment, life-saving equipment and appliances and illustration of immersion suit and lifejacket donning should be available to each passenger and crew member.

14.4.3 Evacuation

14.4.3.1 Evacuation drill scenarios should be varied so that different emergency conditions are simulated, including abandonment into the water, onto the ice, or a combination of the two.

14.4.3.2 Each evacuation craft drill should include:

- .1 exercises in passenger control in cold temperatures as appropriate;
- .2 checking that crew and passengers are suitably dressed;
- .3 donning of immersion suits or thermal protective clothing by appropriate crew members;
- .4 testing of emergency lighting for mustering and abandonment; and
- .5 giving instructions in the use of the ship's life-saving appliances and in survival at sea, on the ice or a combination of both.

14.4.3.3 Rescue boat drills should be conducted as follows:

- .1 As far as is reasonable and practicable, rescue boats should be launched each month as part of the evacuation drill with their assigned crew aboard and manoeuvred in the water, with due consideration of the dangers of launching into Polar Waters if applicable.
- .2 If rescue boat launching drills are carried out with the ship making headway, such drills should be practiced in sheltered waters only and under the supervision of an officer experienced in such drills.**

14.4.3.4 Individual instructions may cover different parts of the ship's life-saving system, but all the ship's life-saving equipment and appliances should be covered within any period of one month on passenger ships and two months on cargo ships. Each member of the crew should be given instructions which should include but not necessarily be limited to:

**Reference is made to resolution A.624(15) concerning guidelines in training for the purpose of launching lifeboats and rescue boats for ships making headway through the water.

- .1 problems of hypothermia, first-aid treatment of hypothermia and other appropriate first-aid procedures; and
- .2 special instructions necessary for use of the ship's life-saving appliances in severe weather and severe sea conditions on the ice or in a combination of water and ice cover.

14.4.4 Fire

14.4.4.1 Fire drill scenarios should vary each week so that emergency conditions are simulated for different ship compartments, with appropriate emphasis on those changes to standard procedure made necessary by operations in Polar Waters and low temperatures;

14.4.4.2 Each fire drill should include elements required by SOLAS plus additional elements made necessary by operation in a polar environment.

14.4.5 Damage Control

14.4.5.1 Damage control drill scenarios should vary each week so that emergency conditions are simulated for different damage conditions with appropriate emphasis to those conditions resultant from operations in Polar Waters.

14.4.6 Survival Kits

14.4.6.1 The Master should ensure that before the ship leaves port and at all times during the voyage, all Personal Survival Kits and Group Survival Kits are complete, in working order, and ready for immediate use.

14.4.6.2 The ship should keep spare personal survival equipment on board for the purpose of providing replacements for missing or damaged items of equipment in those Personal Survival Kits issued to the complement. In addition, a number of sewing kits and replacement parts (buttons, boot laces etc.) should be kept on board for the purpose of minor repair to personal survival kit items of clothing.

14.4.6.3 Group Survival Kit inspections should be carried out annually.

[DIVISION II - PASSENGER SHIPS

14.5 On or before departure, passengers should be instructed in the use of immersion suits and lifejackets and the action to be taken in an emergency in the unique environment of Polar Waters. The attention of the passengers should be drawn to the emergency instructions required by the SOLAS Convention.

14.6 Other special standards for passenger ships not equipped to operate in Polar Waters will be developed in the future.]

Chapter 15

CREWING

15.1 General

15.1.1 The crewing of all ships in Polar Waters should take account of the provisions listed in this Chapter, and also of the relative lack of shore and support infrastructure which may be available to assist in any operations.

15.1.2 Ice Navigators should be provided as specified in chapter 1.

15.1.3 The level of competence and the training considered necessary in respect of the master and each crew member should meet minimum standards, in respect of the particular type and class of ship concerned and the service intended.

15.1.4 As many as possible of the ship's officers and crew should attend an approved cold weather survival course.

15.2 Ice Navigator Qualifications and Training

15.2.1 The Administration should issue a certificate for level 1 ice watchkeeper to persons with a valid deck certificate who have also completed successfully a course of study for Ice Navigators.* The certificate of competency of these persons should be endorsed for full accreditation as an Ice Navigator by the Administration on completion of 30 days experience as a deck watchkeeper while the ship is underway and making way in the presence of Polar ice.

15.2.2 The endorsement should be recognized as an international certification.

15.2.3 Endorsements should be re-validated every five years. Endorsements may be revalidated once the bearer establishes that he or she has had 30 days of Ice Navigator experience within the preceding five year period. The Administration should establish procedures for re-validation.

15.3 Supplementary Standards

15.3.1 Where firearms are carried in accordance with 11.4.2, a minimum of two (2) crew members should be cognizant of current firearm regulations and guidelines and be trained in the use of shot guns or hunting rifles.

15.3.2 A minimum of two (2) crew members should be trained in the use of low frequency radio equipment where fitted.

*[Reference is made to the IMO Model Ice Navigator Course Syllabus]

Chapter 16

EMERGENCY EQUIPMENT

16.1 Medical Equipment

16.1.1 All ships should be provided with an adequate number of first aid kits and equipment with contents suitable to the on board location and recognized provisions for personnel safety hazards of such locations.

16.1.2 All ships should be provided with medical equipment, medicaments, facilities and suitable medical reference publications as a ship equipped for an international voyage.

16.1.3 With respect to the nature of the voyage, ship operations, and the ability to communicate and obtain timely assistance of medical aid or medical evacuation, exemptions of certain medical equipment, medicaments and facilities may be considered unreasonable or unnecessary.

16.1.4 Crews operating in Polar Waters should be provided with appropriate equipment and training to safely evacuate a medical emergency from the ship.
