

RUSSIAN MARITIME REGISTER OF SHIPPING

GUIDELINES

ON APPLICATION OF THE INTERNATIONAL CODE
FOR SHIPS OPERATING
IN POLAR WATERS (POLAR CODE)



Saint-Petersburg
2017

The Guidelines on Application of the International Code for Ships Operating in Polar Waters (Polar Code) have been approved in accordance with the established approval procedure and come into force on 1 January 2017.

The Guidelines have been developed based on the provisions of the International Code for Ships Operating in Polar Waters (Polar Code) adopted by IMO resolutions MSC.385(94) and MEPC.264(68).

The Guidelines are intended for surveyors, crews and shipowners.

In case of discrepancies between the Russian and English versions, the Russian version shall prevail.

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PART I. GENERAL

1 SCOPE OF APPLICATION

1.1 The Guidelines on Application of the International Code for Ships Operating in Polar Waters¹ shall be applied during survey of ships and ship's equipment as well as review of design documentation and documentation for ships under construction or in service for compliance with the requirements of the International Code for Ships Operating in Polar Waters².

1.2 Requirements specified in Part I "General" and related to safety as well as requirements of Part I-A of the Polar Code apply to ships operating in polar waters and having certificates in accordance with Chapter I, SOLAS 74 as mentioned in SOLAS 74 regulations XIV/1 and XIV/2. Requirements specified in Part I "General" and related to environmental protection as well as requirements of Part II-A of the Polar Code apply to ships operating in polar waters as defined, respectively, in Annex I, regulation 47; Annex II, regulation 22; Annex IV, regulation 18 and Annex V, regulation 14 to MARPOL 73/78.

1.3 The survey procedure for compliance with Part I-A of the Polar Code is established in Part I of the Polar Code and Chapter 1 "Provisions on Technical Supervision" of the Guidelines. The survey may be carried out only under the authorization of the ship's Flag Administration³.

1.4 The procedure of certificates issue provided by MARPOL 73/78 and confirming the compliance with the requirements of the Polar Code is established in Chapter 11 "Pollution Prevention Measures" of the Guidelines.

2 DEFINITIONS

2.1 For the purpose of the Guidelines, the definitions specified in the following paragraph are used. Definitions used in Chapters 1 to 10 of the Guidelines, but not defined in this Section shall have the same meaning as defined in SOLAS 74. Definitions used in Chapter 11 "Pollution Prevention

¹Hereinafter referred to as "the Guidelines".

²Hereinafter referred to as "the Polar Code".

³Hereinafter referred to as "the Administration".

Measures", but not defined in this Section shall have the same meaning as defined in Article 2 of MARPOL 73/78 and the relevant MARPOL Annexes.

Polar Code means the International Code for Ships Operating in Polar Waters adopted by IMO resolutions MSC.385(94) and MEPC.264(68).

Category A ship means a ship designed for operation in polar waters in at least medium first-year ice, which may include old ice inclusions¹.

Category B ship means a ship not included in category A, designed for operation in polar waters in at least thin first-year ice, which may include old ice inclusions.

Category C ship means a ship designed to operate in open water or in ice conditions less severe than those included in categories A and B.

Constructed ship means a ship the keel of which is laid or which is at a similar stage of construction.

Similar stage of construction means a stage at which:
construction identifiable with a specific ship begins; and
assembly of that ship has commenced comprising at least 50 tonnes or 1% of the estimated mass of all structural material, whichever is less.

First-year ice means sea ice of not more than one winter growth developing from young ice with thickness from 0,3 m to 2,0 m.

Ice of land origin means ice formed on land or in an ice shelf, found floating in water.

MARPOL 73/78 means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 Protocol relating thereto (MARPOL), as amended.

Medium first-year ice means first-year ice of 0,7 to 1,2 m thick.

Old ice means a sea ice which has survived at least one summer's melt; typical thickness up to 3 m or more. It is subdivided into residual first-year ice, second-year ice and multi-year ice.

Open water means a large area of freely navigable water in which sea ice is present in concentrations less than 1/10. No ice of land origin is present.

Thin first-year ice means a first-year ice of 0,3 to 0,7 m thick.

Sea ice means any form of ice found at sea which has originated from the freezing of sea water.

SOLAS 74 means the International Convention for the Safety of Life at Sea, 1974, as amended.

Escorted operation means any operation in which a ship's movement is facilitated through the intervention of an escort.

¹The classification of ice is adopted according to the Sea Ice Nomenclature of the World Meteorological Organization.

Habitable environment means a ventilated environment that will protect against hypothermia.

Icebreaker means any ship whose operational profile may include escort or ice management functions, whose powering and dimensions allow it to undertake aggressive operations in ice-covered waters.

Ice class means the notation assigned to the ship by Russian Maritime Register of Shipping¹, Administration or by an organization recognized by the Administration showing that the ship has been designed for navigation in sea-ice conditions.

Maximum expected time of rescue means the time adopted for the design of equipment and system that provide survival support. This time shall never be less than 5 days.

Machinery installations mean equipment and machinery and its associated piping and cabling, which is necessary for the safe operation of the ship.

Mean daily low temperature (MDLT) means the mean value of the daily low temperature for each day of the year over a minimum 10-year period. A data set acceptable to the Register or other organization recognized by the Administration may be used if 10 years of data is not available.

Polar class (PC) means the ice class assigned to the ship by the Register or other organization recognized by the Administration based upon IACS unified requirements.

Polar service temperature (PST) means a temperature specified for a ship which is intended to operate in low air temperature, which shall be set at least 10 °C below the lowest MDLT for the intended area and season of operation in polar waters.

Ship intended to operate in low air temperature means a ship which is intended to undertake voyages to or through areas where the lowest MDLT is below – 10 °C.

Tankers mean oil tankers as defined in SOLAS 74 regulation II-1/2.22, chemical tankers as defined in SOLAS 74 regulation II-1/3.19 and gas carriers as defined in SOLAS 74 regulation VII/1.2.

¹Hereinafter referred to as the "Register, RS".

PART II. TECHNICAL REQUIREMENTS

1 PROVISIONS ON TECHNICAL SUPERVISION

1.1 TECHNICAL AND OPERATING DOCUMENTATION

1.1.1 Prior to survey in accordance with provisions of Section 2, Chapter 1 "Provisions on Technical Supervision", as a minimum, the following documentation proving that the requirements of Part I-A of the Polar Code applicable to the ship concerned are complied with, shall be submitted to the **RS Branch Office** performing the survey:

.1 general arrangement plan of the ship and tanks plan;

.2 stability calculation in accordance with 4.3.1, Chapter 4 of the Polar Code for ships operating in areas and during periods where ice accretion is likely to occur, if typical loading conditions under icing are not specified in the Stability Booklet;

.3 damage stability calculation for ice class ships of categories A and B constructed after 1 January 2017, if there are no information on compliance with the requirements of 4.3.2, Chapter 4 of the Polar Code in the Damage Stability Booklet;

.4 operating documentation:

.4.1 Polar Water Operational Manual (PWOM);

.4.2 Stability Booklet.

Upon review of the submitted set of documents, the Register shall send a conclusion letter with confirmation of possibility of the ship's survey in order to issue the Polar Ship Certificate.

1.2 SURVEYS FOR ISSUE, ENDORSEMENT AND RENEWAL OF THE POLAR SHIP CERTIFICATE

1.2.1 The Polar Ship Certificate¹ (form 2.1.29) together with a Record of Equipment (form 2.1.30) shall be issued to each ship to which Part I-A of the Polar Code applies in accordance with SOLAS 74 regulation XIV/2.

¹Hereinafter referred to as "the Certificate".

1.2.2 Types of surveys carried out to confirm the compliance with Part I-A of the Polar Code shall be considered as surveys for issue/endorsement/renewal of certificates according to SOLAS 74. The satisfactory survey results according to SOLAS 74 shall be considered as a requirement for issue/endorsement/renewal of the Certificate according to the Polar Code.

1.2.3 If the Certificate becomes invalid or is invalid for a long period and other certificates remain valid, for renewal of the Certificate, the items additional to those covered by SOLAS 74 shall be subject to survey in a scope specified by the Register taking into account the instructions of the Administration. In this case, the validity period of certificates shall not change according to SOLAS 74.

1.2.4 To confirm the compliance with the Polar Code the following types of surveys shall be established as follows:

.1 initial survey (after construction, in service) carried out to confirm that the items covered by Part I-A of the Polar Code are surveyed in the necessary scope of initial surveys for issue of the Cargo Ship Safety Construction Certificate, Cargo Ship Safety Equipment Certificate, Cargo Ship Safety Radio Certificate or Passenger Ship Safety Certificate;

.2 annual survey carried out to confirm that the items covered by Part I-A of the Polar Code are surveyed in the necessary scope of periodical survey of radio equipment and annual survey of cargo ship construction and equipment;

.3 intermediate survey (second or third annual survey) carried out to confirm that the items covered by Part I-A of the Polar Code and subject to intermediate survey for endorsement of the Cargo Ship Safety Construction Certificate are surveyed in the necessary scope;

.4 periodical survey (second or third annual survey) carried out to confirm that the items covered by Part I-A of the Polar Code and subject to the periodical survey for endorsement of the Cargo Ship Safety Equipment Certificate are surveyed in the necessary scope;

.5 renewal survey carried out to confirm that items covered by Part I-A of the Polar Code are surveyed in the necessary scope of surveys for renewal of the Cargo Ship Safety Construction Certificate, Cargo Ship Safety Equipment Certificate, Cargo Ship Safety Radio Certificate or Passenger Ship Safety Certificate.

1.2.5 The Certificate is endorsed at annual, intermediate and periodical surveys to confirm the satisfactory results of the scope of surveys in accordance with 1.2.4.2 to 1.2.4.5.

1.2.6 The relevant surveys for issue of certificates according to SOLAS 74 including the additional scope of surveys to confirm the compliance with the Polar Code, shall be carried out and appropriate certificates according to SOLAS 74 shall be issued/endorsed before issue/endorsement of the Certificate.

1.2.7 The ship covered by the Polar Code shall be subject to survey by the Register upon shipowner's request and under the authorization of the Administration given in accordance with SOLAS 74 regulation XI-1/1 to confirm the compliance of the ship with the requirements of Parts I-A and II-A of the Polar Code. When applying Parts I-A and II-A of the Polar Code, it is recommended to consider the provisions of Parts I-B and II-B of the Code.

1.2.8 The Certificate with the Record of Equipment shall be issued by the Register upon completion of the relevant survey (initial, renewal) to confirm the compliance of the ship with the requirements of the Polar Code in addition to certificates according to SOLAS 74. The survey results shall be included in the relevant RS records.

1.2.9 If the category C ship is confirmed to comply with the requirements of the Polar Code without any additional equipment or structural modification, the Certificate shall be issued based on the abovementioned endorsement, and survey to confirm the compliance with the Polar Code shall be combined with the next periodical survey.

1.2.10 The Certificate shall be annually endorsed based on results of the RS ship's survey to the extent prescribed. The survey results shall be included in the relevant RS records.

1.2.11 Certificate validity and dates of subsequent surveys shall be harmonized with the relevant SOLAS 74 certificates in accordance with SOLAS-74 regulation I/14.

1.3 OPERATIONAL ASSESSMENT

1.3.1 The following operational limitations and relevant safety measures shall be determined with regard to the intended area of operation and environmental conditions:

PST (according to test temperature used when assigning the distinguishing mark **WINTERIZATION** or if there is no such mark according to minimum design ambient air temperature given in specifications);

maximum expected time of rescue (according to PWOM);

ice conditions (according to the Classification Certificate and the Rules for the Classification and Construction of Sea-Going Ships¹);

temperature (according to the design ambient temperature used when assigning the distinguishing mark **WINTERIZATION**);

high latitudes (according to the Classification Certificate).

¹Hereinafter referred to as "the Rules".

2 POLAR WATER OPERATIONAL MANUAL

2.1 The assessment of the ship for compliance with the requirements of Chapter 2, Part I-A of the Polar Code shall include check for availability of PWOM.

3 SHIP STRUCTURE

3.1 The assessment of the ship for compliance with the requirements of Chapter 3, Part I-A of the Polar Code shall include the following:

.1 check for compliance of exposed hull structural materials with the PST at which the ship is intended to operate. The materials shall be certified by the Register or another organization recognized by the Administration considering the Rules for the Classification and Construction of Sea-Going Ships or IACS unified requirements to polar class ships (refer to 3.3.1, Part I-A of the Polar Code). Ships with the distinguishing mark **WINTERIZATION** in the class notation meet the specified requirement of the Polar Code;

.2 for category A ships check for compliance of hull structural members scantlings with the IACS unified requirements for ships of polar classes **PC1** to **PC5**. Scantlings shall be approved by the Register, Administration or another organization recognized by the Administration (refer to 3.3.2.1, Part I-A of the Polar Code). The ships complying with the requirements of the Rules for ships of ice classes **Arc6** to **Arc9** and **Icebreaker6** to **Icebreaker9** meet the specified requirement of the Polar Code;

.3 for category B ships, check for compliance of hull structural members scantlings with IACS unified requirements for ships of polar classes **PC6** to **PC7**. Scantlings shall be approved by the Register, Administration or another organization recognized by the Administration (refer to 3.3.2.2, Part I-A of the Polar Code). The ships complying with the requirements of the Rules for ships of ice classes **Arc4** and **Arc5** or ships of Baltic ice classes **IA** and **IA Super** meet the specified requirement of the Polar Code;

.4 for ice-strengthened category C ships, check for compliance of hull structural members scantlings with the requirements of the Rules for ships of ice classes **Ice1** to **Ice3** or ships of Baltic ice classes **IB** to **IC**. Scantlings shall be approved by the Register, Administration or another organization recognized by the Administration (refer to 3.3.2.3, Part I-A of the Polar Code).

4 STABILITY AND SUBDIVISION

4.1 The assessment of the ship for compliance with the requirements of Chapter 4, Part I-A of the Polar Code shall include the following:

.1 check that loading conditions under icing complying with the requirements of 2.4, Part IV "Stability" of the Rules (refer to 4.3.1.1, Part I-A of the Polar Code) are specified in the Stability Booklet;

.2 for ships of categories A and B constructed on or after 1 January 2017, check whether the Damage Stability Booklet contains the data that after a damage event with the extents specified in 4.3.2.2, Part I-A of the Polar Code, damage stability complies with the criteria, as provided by SOLAS 74 regulations II-1/7-2.2 and II-1/7-2.3 (refer to 4.3.2, Part I-A of the Polar Code). For ships with damage stability complying with the documents specified in the note to SOLAS 74 regulation II-1/4.1, check whether the Damage Stability Booklet contains the data that after a damage event with the extents specified in 4.3.2.2, Part I-A of the Polar Code, damage stability complies with the criteria, as provided by the abovementioned documents. The ships complying with the requirements of Part V "Subdivision" of the Rules for ships of ice classes **Arc6** to **Arc9** and **Icebreaker6** to **Icebreaker9** meet the specified requirement of the Polar Code.

4.2 The assessment of the ship operating in areas and during periods where ice accretion is likely to occur for compliance with the requirements of Chapter 4, Part I-A of the Polar Code shall include:

.1 check of the ship structure and equipment provides for effective icing protection (refer to 4.3.1.2.1, Part I-A of the Polar Code). Ships with the distinguishing mark **ANTI-ICE** in the class notation meet the specified requirement of the Polar Code;

.2 check that de-icing means are available on board the ship (refer to 4.3.1.2.2, Part I-A of the Polar Code). De-icing means complying with the requirements of 4.2.1.2 to 4.2.1.7, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code.

5 WATERTIGHT AND WEATHERTIGHT INTEGRITY

5.1.1 The assessment of the ship for compliance with the requirements of Chapter 5, Part I-A of the Polar Code shall include the check that the means to remove or prevent ice and snow accretion around hatches and doors are provided (refer to 5.3.1, Part I-A of the Polar Code).

5.2 The assessment of the ship operating in low temperatures for compliance with the requirements of Chapter 5, Part I-A of the Polar Code shall include:

.1 if the hatches or doors are hydraulically operated, check for availability of the means to prevent freezing or excessive viscosity of liquids (refer to 5.3.2.1, Part I-A of the Polar Code). Ships complying with requirements of 7.4.5.2, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.2 check that watertight and weathertight doors, hatches and closing devices which are not within a habitable environment and require access while at sea are designed to be operated by personnel wearing heavy winter clothing including thick mittens (refer to 5.3.2.2, Part I-A of the Polar Code).

6 MACHINERY INSTALLATIONS

6.1 The assessment of the ship for compliance with the requirements of Chapter 6, Part I-A of the Polar Code shall include the following:

.1 check that machinery installations and associated equipment are properly protected against the effect of ice accretion and/or snow accumulation, ice ingestion from sea water, freezing and increased viscosity of liquids, seawater intake temperature and snow ingestion (refer to 6.3.1.1, Part I-A of the Polar Code). The ships complying with the requirements for ice class ships specified in 4.3.1.1, 4.3.1.2, 4.3.2.3 and 12.1.7, Part VIII "Systems and Piping" and 4.2.4.3, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.2 check that working liquids are maintained in a viscosity range that ensures operation of the machinery (refer to 6.3.1.2, Part I-A of the Polar Code);

.3 check that seawater supplies for machinery systems are designed to prevent ingestion of ice, or otherwise arranged to ensure functionality (refer to 6.3.1.3, Part I-A of the Polar Code). Ships complying with the requirements of 4.3.1.2, Part VIII "Systems and Piping" of the Rules meet the specified requirement of the Polar Code.

6.2 The assessment of the ship operating in low temperatures for compliance with the requirements of Chapter 6, Part I-A of the Polar Code shall include:

.1 check that exposed machinery and electrical installation and appliances function at the polar service temperature (refer to 6.3.2.1, Part I-A of

the Polar Code). The exposed machinery and electrical installation and appliances complying with the requirements of 7.6, 7.7, 7.10 and 7.11, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.2 check that means to ensure that combustion air for internal combustion engines driving essential machinery is maintained at a temperature in compliance with the criteria provided by the engine manufacturer are available (refer to 6.3.2.2, Part I-A of the Polar Code). Ships complying with the requirements of 7.6.3, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.3 check for compliance of materials of exposed machinery and foundations with PST at which the ship is intended to operate. The materials shall be certified by the Register or another organization recognized by the Administration considering the IACS unified requirements for polar class ships. Ships with the distinguishing mark **WINTERIZATION** in the class notation meet the specified requirement of the Polar Code.

6.3 The assessment of ice-strengthened ships of categories A, B or C for compliance with the requirements of Chapter 6, Part I-A of the Polar Code shall include:

.1 for category A ships check of scantlings of propeller blades, propulsion line, steering equipment and other appendages for compliance with the IACS unified requirements for ships of polar classes **PC1** — **PC5** or other standards offering an equivalent level of safety. Scantlings shall be approved by the Register, Administration or another organization recognized by the Administration (refer to 6.3.3.1, Part I-A of the Polar Code). The ships complying with the requirements of the Rules for ships of ice classes **Arc6** to **Arc9** and **Icebreaker6** to **Icebreaker9** meet the specified requirement of the Polar Code;

.2 for category B ships check of scantlings of propeller blades, propulsion line, steering equipment and other appendages for compliance with the IACS unified requirements for ships of polar classes **PC6** — **PC7** or other standards offering an equivalent level of safety. Scantlings shall be approved by the Register, Administration or another organization recognized by the Administration (refer to 6.3.3.2, Part I-A of the Polar Code). The ships complying with the requirements of the Rules for ships of ice classes **Arc4** and **Arc5** or ships of Baltic ice classes **IA** and **IA Super** meet the specified requirement of the Polar Code;

.3 for ice-strengthened category C ships, check of scantlings of propeller blades, propulsion line, steering equipment and other appendages for

compliance with the requirements of the Rules for ships of ice classes **Ice1** to **Ice3** or ships of Baltic ice classes **IB** to **IC**. Scantlings shall be approved by the Register, Administration or another organization recognized by the Administration (refer to 6.3.3.3, Part I-A of the Polar Code).

7 FIRE PROTECTION

7.1 The assessment of the ship for compliance with the requirements of Chapter 7, Part I-A of the Polar Code shall include the following:

.1 check that all components of fire safety systems and appliances installed in exposed positions are protected from ice accretion and snow accumulation (refer to 7.2.1.1, Part I-A of the Polar Code);

.2 check that fire safety systems and appliances can be used by persons wearing bulky and cumbersome cold weather gear (refer to 7.2.1.3, Part I-A of the Polar Code);

.3 check for means to remove or prevent ice and snow accretion from accesses to fire safety systems and appliances (refer to 7.2.1.4, Part I-A of the Polar Code);

.4 check that isolating and pressure/vacuum valves in exposed locations are protected from ice accretion (refer to 7.3.1.1, Part I-A of the Polar Code). Valves complying with the requirements of 4.2.4.4, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.5 check that two-way portable radio communication equipment is operable at the PST (refer to 7.3.1.2, Part I-A of the Polar Code);

.6 check that fire pumps, including emergency fire pumps, water mist and water spray pumps, are located in compartments maintained above freezing (refer to 7.3.2.1, Part I-A of the Polar Code). Fire pumps complying with the requirements of 7.7.3.1, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.7 check that exposed sections of the fire main and means of draining of exposed sections can be isolated (refer to 7.3.2.2, Part I-A of the Polar Code). Fire mains complying with the requirements of 4.2.4.4, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.8 check that firefighter's outfit is stored in warm locations on the ship (refer to 7.3.2.3, Part I-A of the Polar Code);

.9 check that sea suction of fixed firefighting systems can be cleared of ice accumulation where fixed firefighting systems are located in a space separate from the main fire pumps (refer to 7.3.2.4, Part I-A of the Polar Code). Fixed firefighting systems complying with the requirements of 3.2.3.6, Part VI "Fire Protection" of the Rules meet the specified requirement of the Polar Code.

7.2 The assessment of the ship operating in low temperatures for compliance with the requirements of Chapter 7, Part I-A of the Polar Code shall include:

.1 check that fire safety systems and appliances are designed to ensure availability and effectiveness under the PST (refer to 7.2.2.1, Part I-A of the Polar Code);

.2 check that portable and semi-portable extinguishers are located in positions protected from freezing temperatures. Extinguishers provided in locations subject to freezing shall be capable of operation under the PST (refer to 7.3.3.1, Part I-A of the Polar Code);

.3 check for compliance of materials of exposed fire safety systems with the PST at which the ship is intended to operate. The materials shall be certified by the Register or another organization recognized by the Administration considering IACS Unified Requirement S6 or the IACS unified requirements to polar class ships (refer to 7.3.3.2, Part I-A of the Polar Code). Ships with the distinguishing mark **WINTERIZATION** in the class notation meet the specified requirement of the Polar Code.

8 LIFE-SAVING APPLIANCES

8.1 The assessment of the ship for compliance with the requirements of Chapter 8, Part I-A of the Polar Code shall include the following:

.1 for ships exposed to ice accretion, check for means to remove or prevent ice and snow accretion from escape routes, muster stations, embarkation areas, survival craft, its launching appliances and access to survival craft (refer to 8.3.1.1, Part I-A of the Polar Code). Ships complying with the requirement of 4.2.3.2, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.2 for ships constructed on or after 1 January 2017, check if exposed escape routes are arranged so as not to hinder passage by persons wearing suitable polar clothing (refer to 8.3.1.2, Part I-A of the Polar Code);

.3 for ships intended to operate in low air temperatures, check that embarkation arrangements fully consider any effect of persons wearing additional polar clothing (refer to 8.3.1.3, Part I-A of the Polar Code);

.4 check that ships have means to ensure safe evacuation of persons, including safe deployment of survival equipment, when operating in ice-covered waters, or directly onto the ice (refer to 8.3.2.1, Part I-A of the Polar Code);

.5 check that life-saving appliances covered by the Polar Code which require a source of power are able to operate independently of the ship's main source of power (refer to 8.3.2.2, Part I-A of the Polar Code);

.6 for passenger ships, check for an immersion suit or a thermal protective aid for each person on board (refer to 8.3.3.1.1, Part I-A of the Polar Code). Ships complying with 3.2.4.1, Part II "Life-Saving Appliances" of the Rules for the Equipment of Sea-Going Ships meet the specified requirement of the Polar Code;

.7 check that all immersion suits are of the insulated type (refer to 8.3.3.1.2, Part I-A of the Polar Code). Ships complying with the requirement of 7.9.2.1.14, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.8 for ships intended to operate in extended periods of darkness, check for a searchlight suitable for continuous use to facilitate identification of ice on each lifeboat (refer to 8.3.3.2, Part I-A of the Polar Code);

.9 check that lifeboats of partially or totally enclosed type are stowed on board the ship (refer to 8.3.3.3.1, Part I-A of the Polar Code). Ships complying with the requirement of 4.2.3.10, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.10 check for appropriate survival resources which address both individual (personal survival equipment) and shared (group survival equipment) needs on board the ship, as required by 8.3.3.3.2, Part I-A of the Polar Code considering 9.1 and 9.2, Part I-B of the Polar Code. Ships complying with the requirement of 7.9.6.1, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.11 where a potential of abandonment onto ice or land is assumed, check of outfit and equipment for compliance with the requirements of 8.3.3.3.3, Part I-A of the Polar Code. Ships complying with the requirements of 7.9.2.1, 7.9.6.1 and 7.9.6.4, Part XVII "Distinguishing Marks and Descriptive Notations in

the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.12 check that passengers are instructed on use of the personal survival equipment and the action to take in an emergency (refer to 8.3.3.3.3.6, Part I-A of the Polar Code);

.13 check that the crew is trained in the use of the personal survival equipment and group survival equipment (refer to 8.3.3.3.3.7, Part I-A of the Polar Code);

.14 check that adequate emergency rations are provided for the maximum expected time of rescue (refer to 8.3.3.4, Part I-A of the Polar Code). Ships complying with requirement of 7.9.1.4, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code.

9 SAFETY OF NAVIGATION

9.1 The assessment of the ship for compliance with the requirements of Chapter 9, Part I-A of the Polar Code shall include the following:

.1 check for means of receiving current information to ensure safety of navigation including information on ice conditions (refer to 9.3.1, Part I-A of the Polar Code). Ships complying with the requirements of 2.2.3, Part V "Navigational Equipment" of the Rules for the Equipment of Sea-Going Ships for ships of ice classes **Icebreaker6** to **Icebreaker9** and **PC1** to **PC7** or having the distinguishing mark **WINTERIZATION** in the class notation meet the specified requirement of the Polar Code;

.2 for ice-strengthened ships of categories A, B or C constructed on or after 1 January 2017, check for either two independent echo-sounding devices or one echo-sounding device with two separate independent transducers (refer to 9.3.2.1.1, Part I-A of the Polar Code). Ships complying with the requirements of 2.2.3, Part V "Navigational Equipment" of the Rules for the Equipment of Sea-Going Ships for ships of ice classes **Icebreaker6** to **Icebreaker9** and **PC1** to **PC7** or having the distinguishing mark **WINTERIZATION** in the class notation meet the specified requirement of the Polar Code;

.3 check the ship for compliance with SOLAS 74 regulation V/22.1.9.4 and for a clear view astern (refer to 9.3.2.1.2, Part I-A of the Polar Code). According to 10.4, Part I-B of the Polar Code, clear view astern shall be also ensured by suitable means to de-ice sufficient conning position windows to provide unimpaired forward and astern vision from conning positions and means of clearing melted ice, freezing rain, snow, mist and spray from outside and

accumulated condensation from inside. A mechanical means to clear moisture from the outside face of a window should have operating mechanisms protected from freezing or the accumulation of ice that would impair effective operation;

.4 for ships where ice accretion is likely to occur, check for means to prevent the accumulation of ice on antennas required for navigation and communication (refer to 9.3.2.1.3, Part I-A of the Polar Code). The equipment complying with 4.2.5.1, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meets the specified requirement of the Polar Code;

.5 When assessing ice-strengthened ships of categories A, B or C for compliance with the requirements of Chapter 9, Part I-A of the Polar Code, the check shall include:

.5.1 if sensors that project below the hull are provided, check that such sensors are protected against ice (refer to 9.3.2.1.4.1, Part I-A of the Polar Code);

.5.2 for ships of categories A and B constructed on or after 1 January 2017, check that bridge wings are enclosed or designed to protect navigational equipment and operating personnel (refer to 9.3.2.1.4.2, Part I-A of the Polar Code);

.6 check that two independent non-magnetic means to determine and display the heading connected to the ship's main and emergency source of power (refer to 9.3.2.2.1, Part I-A of the Polar Code);

.7 for ships proceeding to latitudes over 80 degrees, check whether at least one GNSS compass or equivalent which shall be connected to the ship's main and emergency source of power is fitted (refer to 9.3.2.2.2, Part I-A of the Polar Code). Ships complying with the requirements of 2.2.3, Part V "Navigational Equipment" of the Rules for the Equipment of Sea-Going Ships for ships of ice classes **Icebreaker6** to **Icebreaker9** and **PC1** to **PC7** or having the distinguishing mark **WINTERIZATION** in the class notation meet the specified requirement of the Polar Code;

.8 for all ships, with the exception of those solely operating in areas with 24 hours daylight, check for two remotely rotatable, narrow-beam search lights controllable from the bridge to provide lighting over an arc of 360°, or other means to visually detect ice (refer to 9.3.3.1, Part I-A of the Polar Code). Ships complying with the requirements of 7.7.3.1 and 7.7.3.2, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.9 for ships involved in operations with an icebreaker escort check for a manually initiated flashing red light visible from astern to indicate when the ship

is stopped. This light shall have a range of visibility of at least two nautical miles, and the horizontal and vertical arcs of visibility shall conform to the stern light specifications required by the International Regulations for Preventing Collisions at Sea, 1972 (refer to 9.3.3.2, Part I-A of the Polar Code). Ships complying with the requirements of 7.11.3.4, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code.

10 COMMUNICATION

10.1 The assessment of the ship for compliance with the requirements of Chapter 10, Part I-A of the Polar Code shall include the following:

.1 check whether communication equipment on board have the capabilities for ship-to-ship and ship-to-shore communication, taking into account the limitations of communications systems in high latitudes and the anticipated low temperature (refer to 10.3.1.1, Part I-A of the Polar Code). Ships with the distinguishing mark **WINTERIZATION** in the class notation meet the specified requirement of the Polar Code;

.2 for ships intended to provide icebreaking escort check for a sound signaling system mounted to face astern to indicate escort and emergency manoeuvres to following ships as described in the International Code of Signals (refer to 10.3.1.2, Part I-A of the Polar Code);

.3 check for two-way on-scene means in distress situations and coordination communications for search and rescue purposes, as required by 10.3.1.3 of the Polar Code;

.4 check for capability of two-way voice and data communication with a Telemedical Assistance Service (TMAS) (refer to 10.3.1.4, Part I-A of the Polar Code);

.5 check whether procedures on board the ship are developed and implemented such that mandatory communication equipment for use in survival craft, including liferafts, and rescue boats are available for operation during the maximum expected time of rescue recognizing the limitations arising from battery life (refer to 10.3.2.3, Part I-A of the Polar Code).

10.2 The assessment of the ship operating in low temperatures for compliance with the requirements of Chapter 10, Part I-A of the Polar Code shall include:

.1 check for communication means, as required by 10.3.2.1, Part I-A of the Polar Code, in all rescue boats and lifeboats used during evacuation.

Lifeboats complying with the requirements of 7.9.2.1.9, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the requirements specified in 10.3.2.3 of the Polar Code;

.2 check for communication means, as required by 10.3.2.2, Part I-A of the Polar Code, in all other rescue boats and lifeboats. Lifeboats complying with the requirements of 7.9.2.1.9, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the requirements specified in 10.3.2.2.2, Part I-A of the Polar Code.

11 POLLUTION PREVENTION MEASURES

11.1 For each ship covered by the requirements of Part II-A of the Polar Code in accordance with Annex I, regulation 47; Annex II, regulation 22; Annex IV, regulation 18 and Annex V, regulation 14 to MARPOL 73/78, certificates issued under Annexes I and II to MARPOL 73/78¹ shall be re-issued.

11.2 If the ship is not required to comply with 1.2, Part II-A of the Polar Code, International Oil Pollution Prevention Certificate (IOPP Certificate) is not re-issued until expiry.

11.3 To re-issue the certificates issued under Annexes I and II to MARPOL 73/78, the Register shall verify the compliance the of following documents with the specified requirements:

- .1 Oil Record Book;
- .2 Oil Pollution Emergency Plan (if applicable);
- .3 Marine Pollution Emergency Plan (Oil and Noxious Liquid Substance Pollution Emergency Plan) (if applicable);
- .4 Marine Pollution Emergency Plan for Noxious Liquid Substances (if applicable);
- .5 Procedures and Arrangements Manual, Annex II to MARPOL 73/78 (if applicable);
- .6 Garbage Management Plan, placards and Garbage Record Book.

11.4 The assessment of the ship for compliance with the requirements of Chapter 1, Part II-A of the Polar Code shall include the following:

.1 check that relevant entries to Oil Record Book, Oil Pollution Emergency Plan and Marine Pollution Emergency Plan (Oil and Noxious Liquid Substance

¹The certificate provided by Annex V to MARPOL 73/78 shall be issued at the shipowner's discretion.

Pollution Emergency Plan) according to 1.1.4, Part II-A of the Polar Code are made.

Where postponement of the requirements of 1.1.1, Part II-A of the Polar Code is granted by Administration for the category A ship constructed before 1 January 2017, check for a letter of Administration on approval of such postponement shall be carried out on board the ship. This ship shall comply with the requirements of 1.1.1 not later than during the first intermediate survey or renewal survey, whichever comes first, after 1 January 2018. Before the specified date, these ships shall comply with the discharge requirements specified in Annex I, regulation 15.3 to MARPOL 73/78.

For category A ships with no granted postponement and ships of categories B and C, the documents listed in 11.3.2 to 11.3.5, Chapter 11 "Pollution Prevention Measures" shall be submitted to the Register for approval before 1 January 2017 or prior to voyage in polar waters planned after this date;

.2 for category A and B ships constructed on or after 1 January 2017 with an aggregate oil fuel capacity of less than 600 m³, check whether all oil fuel tanks other than small fuel tanks with maximum individual capacity not greater than 30 m³ are separated from the outer shell by a distance of not less than 0,76 m (refer to 1.2.1, Part II-A of the Polar Code). Ships complying with the requirements of 7.3.2, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.3 for category A and B ships other than oil tankers constructed on or after 1 January 2017, check whether all cargo tanks constructed and utilized to carry oil are separated from the outer shell by a distance of not less than 0,76 m (refer to 1.2.2, Part II-A of the Polar Code). Ships complying with the requirements of 7.3.2, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.4 for category A and B oil tankers of less than 5000 t deadweight constructed on or after 1 January 2017, check whether the entire length of all cargo tanks is protected by double bottom tanks or spaces in compliance with the applicable requirements of regulation 19.6.1, Annex I to MARPOL 73/78 and wing tanks or spaces located in compliance with regulation 19.3.1, Annex I to MARPOL 73/78 and relevant applicable requirements to distance according to regulation 19.6.2, Annex I to MARPOL 73/78 (refer to 1.2.3, Part II-A of the Polar Code). Ships complying with the requirements of 7.3.1, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation

Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code;

.5 for category A and B ships constructed on or after 1 January 2017, check that all oil residue (sludge) tanks and oily bilge water holding tanks other than small tanks with maximum individual capacity not greater than 30 m³ are separated from the outer shell by a distance of not less than 0,76 m (refer to 1.2.4, Part II-A of the Polar Code). Ships complying with the requirements of 7.3.3, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules meet the specified requirement of the Polar Code.

11.5 The assessment of the ship for compliance with the requirements of Chapter 2, Part II-A of the Polar Code shall include check that relevant entries to Procedures and Arrangements Manual, Marine Pollution Emergency Plan for Noxious Liquid Substances according to 2.1.2, Part II-A of the Polar Code are made.

11.6 The assessment of the ship for compliance with the requirements of Chapter 4, Part II-A of the Polar Code shall include the following:

.1 check that a sewage treatment plant is approved by the Administration in accordance with the requirements of 4.2.1, Part II-A of the Polar Code;

.2 check for calculation of untreated sewage water discharge rate with maximum permissible values of discharge rate approved by the Administration (refer to 4.2.3, Part II-A of the Polar Code).

11.7 The assessment of the ship for compliance with the requirements of Chapter 5, Part II-A of the Polar Code shall include check that relevant entries are made to the Garbage Management Plan and Garbage Record Book according to 5.2.3, Part II-A of the Polar Code.

Российский морской регистр судоходства

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