



भारत सरकार / GOVERNMENT OF INDIA  
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय  
MINISTRY OF PORTS, SHIPPING AND WATERWAYS

नौवहन महानिदेशालय, मुंबई  
DIRECTORATE GENERAL OF SHIPPING, MUMBAI



### Merchant Shipping Notice No. 07 of 2024

File No. 13-28/1/2024-ENGG - DGS

Date: 13.02.2024

**Subject: Polar Code requirements for ships entering Arctic or Antarctic waters, under the provisions of Chapter XIV of the International Convention for the Safety of Life at Sea, 1974, as amended**

#### 1. Background & Purpose:

- 1.1. Recognising, SOLAS Chapter XIV introduces the International Code for Ships Operating in Polar Waters (Polar Code), which was adopted by IMO under Resolutions MSC.385(94) on 21 November 2014 and MEPC.264(68) on 15 May 2015.
- 1.2. The purpose of this Notice is to provide the requirements for ships entering Arctic or Antarctic waters, under the provisions of Chapter XIV of the International Convention for the Safety of Life at Sea, 1974, as amended- Safety Measures for Ships Operating in Polar Waters (SOLAS Chapter XIV), which was adopted by the International Maritime Organization (IMO) by Resolution MSC.386(94) on 21 November 2014.
- 1.3. This Notice should be read in conjunction with the Polar Code and Circular MSC.1/Circ.1519 *Guidance on methodologies for assessing operational capabilities and limitations in ice.*
- 1.4. Classification requirements for ships assigned with Polar Class (Ice Class) have been published by the International Association of Classification Societies (IACS) and can be found in IACS Unified Requirement I.

#### 2. Purpose and Applicability:

This Notice applies to all Indian Ships including ships below non-convention size that intend to proceed to Polar Water areas.

#### 3. Structure of Polar Code

- 3.1. In accordance with Regulation 1.4 of SOLAS Chapter XIV, Polar Waters are defined as “Arctic waters and/or the Antarctic area”.
- 3.2. Regulation 1.3 defines Arctic waters as “...those waters which are located north of a line from the latitude 58o00’.0 N and longitude 042o00’.0 W to latitude 64o37’.0 N, longitude 035o27’.0 W and thence by a rhumb line to latitude 67o03’.9 N, longitude 026° 33’.4 W and thence by a rhumb line to the latitude 70o49’.56 N and longitude 008° 59’.61 W

(Sørkapp, Jan Mayen) and by the southern shore of Jan Mayen to 73° 31'.6 N and 019° 01'.0 E by the Island of Bjørnøya, and thence by a great circle line to the latitude 68 ° 38'.29 N and longitude 043o23'.08 E (Cap Kanin Nos) and hence by the northern shore of the Asian Continent eastward to the Bering Strait and thence from the Bering Strait westward to latitude 60o N as far as Il'pyrskiy and following the 60th North parallel eastward as far as and including Etolin Strait and thence by the northern shore of the North American continent as far south as latitude 60o N and thence eastward along parallel of latitude 60 ° N, to longitude 056o37'.1 W and thence to the latitude 58°00'.0 N, longitude 042° 00'.0 W”.

3.3. Regulation 1.2 defines Antarctic waters as “...the sea area south of latitude 60o S”.



Fig 1- Outline of Arctic Waters

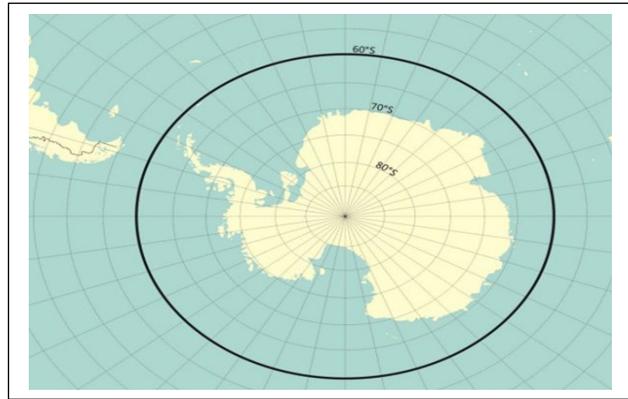


Figure 2 – Outline of Antarctic waters

3.4 The Polar Code consists of Part A (mandatory requirements) and Part B (guidance). Part I-A addresses safety related measures and Part II-A outlines pollution prevention requirements.

3.5 Non-mandatory Part I-B and Part II-B provide guidance on implementation of the requirements listed in Parts I-A and II-A respectively, and should be taken into consideration when preparing a Polar Waters Operation Manual (PWOM).

#### 4. Operations in Polar Waters

4.1. The pattern of summer navigation through northern sea areas such as the Russian Northern Sea Route, North-West Passage in Canada, around the southern tip of Iceland, in Hudson Bay and around Alaska was traditionally considered as not imposing any specific demands on non-ice-strengthened ships, beyond those already addressed by the existing Conventions.

4.2. The Polar Code requires ships operating in Polar Waters to be assessed for operational limitations, hold a PWOM and then be surveyed and issued with a Polar Ship Certificate. Indian Ships should have a PWOM approved by any RO authorised by the Indian Administration.

4.3. A timely discussion with the Recognised Organisation and advance operational assessment

and compilation of a comprehensive PWOM, covering specific sailing areas where the ship is likely to operate and accounting for any seasonal variations, will facilitate issuance of a Polar Ship Certificate, particularly when such certification may be required at short notice.

4.4. Port State Control (PSC) regimes will verify the availability of Polar Ship Certificates on board ships transiting through Polar Waters regardless of whether the port of origin and/or destination may be located outside of Polar Waters.

4.5. PSC will also verify the availability of Polar Ship Certificates on board ships that have arrived at their ports from within Polar Waters, or whose destination is within Polar Waters.

## 5. Polar Code – Main Points

5.1. The scope of application of the Polar Code requirements is dependent on the design features of the ship. For the application of Polar Code requirements, ships are sub- divided into three categories as follows:

5.1.1. **Category A ship** means a ship designed for operation in Polar Waters in at least medium first-year ice, which may include old ice inclusions, e.g. ships with a higher degree of ice-strengthening of the hull;

5.1.2. **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, e.g. ships with a medium ice-strengthening of the hull;

5.1.3. **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, e.g. ships with none or optional minimal ice-strengthening of the hull.

5.2. The essential requirements of the Polar Code can be summarised into a non- exhaustive list as follows:

i. All ships operating in Polar Waters are to be certificated in accordance with paragraph 1.3 of Part 1-A of the Polar Code. The Polar Ship Certificate shall be issued after a successful initial or renewal survey to verify compliance with the applicable Polar Code requirements and shall be harmonised with the ship's other SOLAS certificates;

ii. Where the operational assessment of a Category C ship indicates that no additional

equipment nor structural modification is required to demonstrate compliance with the Polar Code for the intended voyage to Polar Waters, the Polar Ship Certificate can be issued administratively, based on document verification. In this case the validity of the Polar Ship Certificate shall be confirmed at next scheduled SOLAS- related survey. The document verification referenced in the above shall be completed by the Bahamas Recognised Organisation that classes the ship (for dual Class ships, the Recognised Organisation that issues the statutory certificates);

- iii. All ships operating in Polar Waters shall carry a PWOM. The PWOM shall include risk assessments, main procedures and operational measures devised for Polar Water operations as addressed in Chapter 2 of the Polar Code;
- iv. All ships operating in Polar Waters shall be manned by an adequately trained crew;
- v. Provisions for additional LSA and “winterisation” of existing safety equipment on board;
- vi. Specific requirements related to oily mixtures and sewage discharges, garbage handling and emission regulations, as required under the International Convention for the Prevention of Pollution from Ships 1973, as amended (MARPOL), adopted by IMO through Resolution MEPC.265(68);
- vii. Provision of additional navigation equipment beyond the requirements of Regulation 19 of SOLAS Chapter V, e.g. ships will need to have at least two non- magnetic means to determine and display their heading, provision of two or more echo-sounding transducers for ice-strengthened ships, GNSS compass for ships intended to proceed to areas above 80° latitude;
- viii. Additional stability and subdivision requirements applicable to new ships are addressed in Chapter 4 of the Polar Code. New ships of Category A and B shall have sufficient residual stability at all loading conditions to sustain ice-related damages.

## **6. Life-Saving Appliances**

- 6.1. Life-saving appliances and associated equipment and resources shall be provided in such a manner and in sufficient quantities to effectively allow evacuation of all persons from the ship and support survival for the duration of the maximum expected rescue time.
- 6.2. Provisions for abandoning the ship shall cover the possibility of evacuation to water, ice, or land.

- 6.3. The maximum expected rescue time shall be not less than 5 days. For operations in remote areas of the Arctic and Antarctica the expected rescue time may constitute a significant period due to scarce Search and Rescue (SAR) coverage
- 6.4. Requests for any exemptions or dispensations shall be submitted to the Directorate General of shipping along with a recommendation report from the Recognised Organisation.

## **7. Operations in Low Temperatures and in Ice**

- 7.1. Where the ship is intended to operate in low temperatures it must be demonstrated that the design and operational capabilities of the structure and equipment are adequate for the conditions likely to be encountered.
- 7.2. The Polar Code introduces Mean Daily Low Temperature (MDLT) and Polar Service Temperature (PST) .
- 7.3. The value of MDLT shall be based on an observation data set from the area where the ship intends to operate, which covers at least 10 years of temperature observation. PST is set at least 10<sup>0</sup>C below the lowest MDLT for the intended area and season.
- 7.4. Reference with respect to MDLT for obtaining a reliable 10 years' observation temperature data set for certain localities within the Arctic and Antarctic, Directorate General of Shipping may accept shorter temperature observation data sets that may be available through local authorities, operators stationed in these areas or recognised scientific institutions.
- 7.5. When a ship operating pattern is such as to require entry into Polar Waters at irregular intervals, during different seasons and in various locations the value of MDLT/PST shall cover all expected operational conditions likely to be encountered. selection of the lowest expected MDLT/PST value that may be reasonably supported by the design and features of an individual ship.
- 7.6. The PWOM shall include procedures and arrangements for maintaining life support and integrity of an ice-strengthened ship in the event of prolonged entrapment by ice. Prolonged entrapment by ice shall be taken as a period of time longer than the time required for the ship to navigate at safe speed from the entrapment location to the nearest port or point where assistance can be rendered.

## **8. STCW and Crew Training Requirements**

8.1. Specific polar operations training is considered mandatory for the Master and navigational watch officers, as outlined in Chapter 12 of the Polar Code. Training requirements are addressed in the International Convention on Standards of Training and Certification for Watchkeepers (STCW) 1978, as amended, through IMO Resolutions MSC.416(97) and MSC.417(97) and DG Circulars.

8.2. Further guidance on training requirements is provided on DG Shipping website under STCW 2010 Training Circular 23 of 2018 and NT exam circular 02 of 2018

## **9. MARPOL Annex I – Discharges and Structural Requirements**

9.1. In accordance with paragraph 1.1.1 of Part II-A of the Polar Code, discharge to sea of oil or oily mixtures in Arctic waters is prohibited.

9.2. Operation in Polar Waters shall be taken into account, as appropriate, in the Oil Record Books, the PWOM and the shipboard oil pollution emergency plan or the shipboard marine pollution emergency plan as required by MARPOL Annex I.

9.3. The following requirements apply to new ships of Category A and B:

- i. on ships with aggregate oil fuel capacity of less than 600m<sup>3</sup> all oil fuel tanks with individual capacity greater than 30m<sup>3</sup> shall be separated from the outside shell by a distance of not less than 0.76 metres;
- ii. all oil residues (sludge) and bilge water tanks with individual capacity greater than 30m<sup>3</sup> shall be separated from the outside shell by a distance of not less than 0.76 metres;
- iii. oil tankers of less than 5,000 tonnes deadweight shall have the entire cargo tank length protected with double bottom and wing tanks or void spaces complying with the requirements of Regulation 19 of MARPOL Annex I;
- iv. on ships other than oil tankers, all cargo tanks intended for the carriage of oil shall be separated from the outside shell by a distance of not less than 0.76 metres

## **10. MARPOL Annex II – Discharges and Structural Requirements**

10.1. In accordance with paragraph 2.1.1 of Part II-A of the Polar Code, any discharge into the sea in Arctic waters of noxious liquid substances, or mixtures containing such substances, is prohibited.

10.2. Operation in Polar Waters shall be taken into account, as appropriate, in the Cargo Record Book, the PWOM and the shipboard marine pollution emergency plan for noxious liquid

substances or the shipboard marine pollution emergency plan as required by MARPOL Annex II.

- 10.3. For category A and B ships constructed on or after 1 January 2017, the carriage of NLS identified in chapter 17, column e, as ship type 3 or identified as NLS in chapter 18 of the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk in cargo tanks of type 3 ships shall be subject to the approval of the Recognised Organisation on behalf of Indian Flag. The results shall be reflected on the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk or Certificate of Fitness identifying the operation in Polar Waters.

## **11. MARPOL Annex IV – Discharges**

- 11.1. Discharges of sewage within Polar Waters are prohibited except when performed in accordance with MARPOL Annex IV and the following requirements:
- i. The ship is discharging comminuted and disinfected sewage in accordance with Regulation 11.1.1 of MARPOL Annex IV at a distance of more than 3 nautical miles from any ice-shelf or fast ice and shall be as far as practicable from areas of ice concentration exceeding 1/10; or
  - ii. The ship is discharging sewage that is not comminuted or disinfected in accordance with Regulation 11.1.1 of MARPOL Annex IV and at a distance of more than 12 nautical miles from any ice-shelf or fast ice and shall be as far as practicable from areas of ice concentration exceeding 1/10; or
  - iii. the ship has in operation an approved sewage treatment plant meeting the operational requirements in either Regulation 9.1.1 or 9.2.1 of MARPOL Annex IV, and discharges sewage in accordance with Regulation 11.1.2 of Annex IV and shall be as far as practicable from the nearest land, any ice-shelf, fast ice or areas of ice concentration exceeding 1/10.
- 11.2 Discharge of sewage into the sea is prohibited from category A and B ships Discharge constructed on or after 1 January 2017 and all passenger ships constructed on or after 1 January 2017, except when such discharges are in compliance with paragraph iii.
- 11.3 Notwithstanding the requirements of paragraph 11.1, category A and B ships that operate in areas of ice concentrations exceeding 1/10 for extended periods of time, may only discharge sewage be using an approved sewage treatment plant meeting the operational requirements in either Regulation 9.1.1 or 9.2.1 of MARPOL Annex IV. Such discharges shall be subject to the approval of this Directorate.

## **12. MARPOL Annex V – Discharges, Garbage Management Plan and Placards**

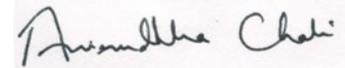
- 12.1. In Arctic waters, discharge of garbage into the sea permitted in accordance with

Regulation 4 of MARPOL Annex V shall meet the additional requirements specified in paragraph 5.2.1 of Part II-A of the Polar Code.

12.2. In the Antarctic area, discharge of garbage into the sea permitted in accordance with Regulation 6 of MARPOL Annex V, shall meet the additional requirements specified in paragraph 5.2.2 of Part II-A of the Polar Code.

12.3. Operation in Polar Waters shall be taken into account, as appropriate, in the Garbage Record Book, Garbage Management Plan required under Regulation 10 of MARPOL Annex V, and the related Placards. Specifically, the ship's Garbage Management Plan shall refer to the requirements of paragraph 5.2 of Part II-A of the Polar Code for ships intended to operate in Polar Waters

This is issued with the approval of the Director General of Shipping & Additional Secretary to the Govt. of India.



(Aniruddha Chaki)  
E&SS-cum-DDG(Tech.)

To,

1. The Principal Officer/ Mercantile Marine Department, Mumbai/Kolkata/ Chennai/ Kandla/ Kochi.
2. The Surveyor-in-charge, Mercantile Marine Department, Goa/Jamnagar/Port Blair / Visakhapatnam /Tuticorin /Noida /Haldia/ Paradip /Mangalore.
3. All Recognised Organizations.
4. Indian National Ship-owners' Association (INSA), Mumbai.
4. CS/NA/Dy.CSS
5. Hindi Cell with request to provide Hindi translation.
6. Computer Cell with request to upload on DGS website