



## TECHNICAL INFORMATION

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**No : 2019-IMO-04**  
**Date : 07 August, 2019**

**Subject : Application of Polar Code to category C cargo ships operating in limited polar waters occasionally during summer season in accordance with Polar Code I-A/1.3.3**

The Polar Code was adopted by Res.MSC.385(94) and Res.MEPC.264(68) to make the requirements of "the International Code for Ships Operating in Polar Water" (herein after referred to "Code"). The code, which entered into force on 1 January 2017, became a mandatory instrument under both SOLAS and MARPOL. That is, the safety-related requirements became mandatory under the new chapter XIV of SOLAS and the marine environment protection related requirements became mandatory under amendments to Annexes I, II, IV and V of MARPOL.

The Polar Code allows category C cargo ships for operating in limited polar waters occasionally to apply mitigated requirements of the Code in accordance with Polar Code I-A/1.3.3<sup>1</sup>.

This requirement may be applicable to cargo ships operating in limited polar waters during summer season only. In recent summer, there has been an increase in the number of polar voyages under these conditions.

Therefore, this Technical Information is intended to provide general information on the Polar Code, as well as relevant information on **Category C cargo ships applicable to Polar Code I-A/ 1.3.3 operating in limited polar waters during summer season.** Shipowners / Operators considering polar voyages in such case, please be note the followings.

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<sup>1</sup> Polar Code I-A/1.3.3: For category C cargo ships, if the result of the assessment in paragraph 1.5 is that no additional equipment or structural modification is required to comply with the Polar Code, the Polar Ship Certificate may be issued based upon documented verification that the ship complies with all relevant requirements of the Polar Code. In this case, for continued validity of the certificate, an onboard survey should be undertaken at the next scheduled survey.

## 1. General requirements

### (1) Structure of the Polar Code

Polar Code	Requirement	Adoption	Related Convention
<b>Part I : Safety measures</b>		Res.MSC.385(94)	SOLAS chapter XIV
Part I-A	Mandatory provisions on safety measures		
Part I-B	Recommendation on safety		
<b>Part II : Pollution prevention measures</b>		Res.MSC.264(68)	MARPOL Annex I, II, IV, V
Part II-A	Mandatory provisions on pollution prevention		
Part II-B	Recommendations on pollution prevention		
Appendix I: Form of Certificate for Ships operating in Polar Waters			
Appendix II: Model table of contents for the Polar Water Operational Manual(PWOM)			

### (2) Application of the Polar Code

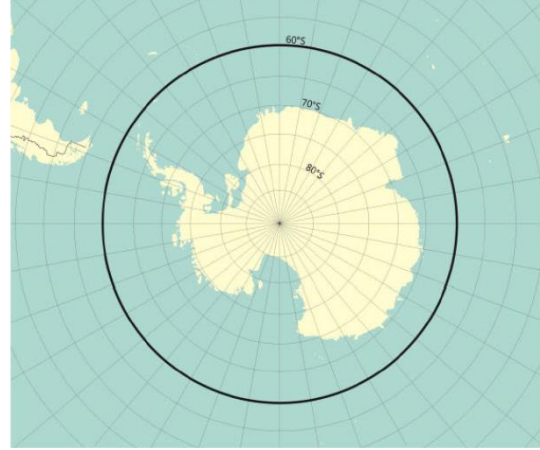
For safe ship operation and the protection of the polar environment, the relevant requirements of the Code shall be met as follows.

#### (a) Part I (SAFETY MEASURES)

The code is mandatory for all ships operating in polar waters, as defined in SOLAS XIV.Reg.1, certified in accordance with SOLAS chapter I and Part I of the Code applies to following ships accordingly. A **Polar Ship Certificate (hereinafter referred to as "PSC")** is issued when the requirement of Part I of the Code are met in satisfactory.



**[Arctic waters]**



**[Antarctic area]**

- In case of new ship which is constructed on or after 1 January 2017, it shall be meet the relevant requirements of the Polar Code from its effective date 1 January 2017.

- In case of existing ship which is constructed before 1 January 2017, it shall be meet the relevant requirements of the Polar Code by the first intermediate or renewal survey, whichever occurs first, after 1 January 2018.

✘ *In case of Passenger Ship, it should be consistent with Renewal survey and Cargo Ship should be consistent with SC intermediate or renewal survey. (Refer to MSC.1/Circ.1562)*

**In other words, for existing ship, it is not necessary to issue the PSC in case of operating in the polar waters before the time of the first above mentioned survey.**

**(b) Part II (POLLUTION PREVENTION MEASURES)**

Part II of the Code applies to all ships operating in polar waters from 1 January 2017.

**(3) Polar Water Operational Manual; PWOM - Polar Code I-A/2**

All ships subject to this code shall be provided with Polar Water Operational Manual (PWOM). The PWOM is not be subject to an approval by the Administration or classification society and it is the responsibility of the shipowner to prepare the proper PWOM and provide it on board.

The PWOM shall provide the owner, operator, master and crew with sufficient information regarding the ship's operational capabilities and limitations in order to support their decision-making process and it should be complied with Part I-A/Reg.2.

When appropriate information, procedures or plans exist elsewhere in a ship's documentation, the PWOM itself does not need to replicate this material, but may instead cross-reference the relevant reference document. (Refer to Polar Code I-B/3.1.1)

For reference, the Code provides "Model table of contents for the Polar Water Operational Manual (PWOM)" in Appendix II as recommendatory.

#### **(4) Operational assessment – Polar Code I-A/1.5**

The operational limitation is subject to temperature, latitude etc. and the code requires "Operational assessment" to be carried out in order to establish procedures or Operational limitations for systems and equipment in accordance with Part I-A/Reg.1.5

To provide guidance on these operational assessment, the IMO approved MSC.1/Circ.1519<sup>2</sup> as methodologies for assessing operational capabilities and limitations, such as POLARIS, in ice were provided in the circular.

Therefore, ships owner or operator, prior to operate in polar waters, should conduct this operational assessment considering ship's structure, intended voyage, ice conditions etc. by using proper methodologies(e.g. POLARIS, AIRSS, Ice certificate etc.) and the result of this assessment should be properly included in PWOM or relevant documents if necessary.

In addition, the information of item 5 in PSC which is "Operational limitation" including Ice conditions, Temperature, High latitude should be provided under this assessment.

## **2. Application of the requirements of Polar Code I-A/1.3.3**

### **(1) Part I Safety Measures**

In accordance with Polar Code I-A/1.3.3, for category C cargo ships, if **the result of the shipowner's assessment** in I-A/Reg.1.5 is that no additional equipment or structural modification is required to comply with the code and shipowner confirm this result, the PSC may be issued based upon **documented verification** that the ship complies with all relevant requirements of the code.

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<sup>2</sup> MSC.1/Circ.1519: *Guidance on methodologies for assessing operational capabilities and limitations in ice*

The above case is mainly applied to category C cargo ships that undertake occasional or limited polar voyage such as summer season, and if the followings are confirmed by documented verification, the PSC may be issued without additional equipment or structural modification required in each chapter of the Code.

- (a) Result of operational assessment provided by shipowner
  - .1 Ship's category: Category C
  - .2 The written result states that "no additional equipment or structural modification is required to comply with the Polar Code".
  - .3 Limited to ice free waters only
  - .4 *Intended not to operate in low air temperature*<sup>3</sup> (Lowest *MDLT*<sup>4</sup> is above -10°C)
  - .5 Not proceeding to latitude over 80°
  - .6 Name of operational assessment system (e.g. POLARIS, AIRSS, Ice certificate, etc.)
  - .7 *Maximum expected time of rescue*<sup>5</sup> (not less than 5 days)
- (b) Proper PWOM and relevant document onboard (reflecting the result of operational assessment above)
- (c) Valid statutory and class certificates
- (d) Voyage planning which specified routing, operating season and period

#### Actions to be taken by shipowners / operators

In order to issue a PSC in accordance with the Polar Code I-A / 1.3.3, the necessary data/information for verification of the above documents shall be made/prepared and submitted to the surveyor. (A review fee is charged for this verification of document)

For reference, the PSC means that it meets the requirements for safety measures corresponding to Part I of the Code. This means that this certificate is valid only for operating polar waters within the ship's operational limits (low temperature, high latitude, ice, etc.) based on shipowner's operational assessment.

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<sup>3</sup> Refer to Polar Code I-A/1.2.12 "Ship intended to operate in low air temperature"

<sup>4</sup> Refer to Polar Code I-A/1.2.9 "Mean Daily Low Temperature (MDLT)"

<sup>5</sup> Refer to Polar Code I-A/1.2.7 "Maximum expected time of rescue"

### 👁 Actions to be taken by surveyors

Where shipowner/operator requests to issue the PSC, the surveyor should conduct the documented verification as mentioned in 2.(1) above and confirm the ship complies with Polar Code I-A/1.3.3, if satisfactory, the PSC could be issued.

It is noted that the surveyor has to properly charge the review fee using visit base for these verification of document.

## **(2) Part II Pollution prevention measures**

### **(a) Regulations for the prevention of pollution by oil (MARPOL Annex I)**

- In Arctic waters any discharge into the sea of oil or oily mixtures from any ship shall be prohibited. Therefore, bilge water through bilge separator shall not be discharged in Arctic waters, and this requirement shall not apply to the discharge of clean or segregated ballast water.

- Operation in Polar waters shall be taken into account, as appropriate, in the Oil Record Book and Shipboard Oil Pollution Emergency Plan. Appropriate operational procedures in the form of the SOPEP should be updated before entry into polar waters to reflect these additional requirements.

#### .1 Oil Record Book

- Where the oil record book is supplemented by the introduction or company procedures that make reference to the Control of Operational Discharge of Oil text in MARPOL Annex I (regulation 15 and 34), it is recommended that these company procedures or introduction of the oil record book are amended before operation in polar waters in order to reflect the operational requirements on prohibition of oil or oily mixtures in polar waters.

#### .2 SOPEP

- Where ship companies may have tailored their documentation to include specific references to discharge limitations for specific areas, SOPEP text should be amended to refer discharge prohibition of oil or oily mixtures in Arctic waters. In this case re-approval of SOPEP is not required.

**(b) Regulations for the prevention of pollution by Noxious Liquid Substances**

**(MARPOL Annex II and IBC Code)**

- In Arctic waters any discharge into the sea of noxious liquid substances, or mixtures containing such substances, shall be prohibited.

- Operation in polar waters shall be taken into account, as appropriate, in the Cargo Record Book, P&A Manual and the Shipboard Marine Pollution Emergency Plan (SMPEP) as required by MARPOL Annex II. Appropriate operational procedures, in the form of the SMPEP should be updated before entry into polar waters to reflect these additional operational requirements.

.1 Cargo Record Book

- Where the cargo record book is supplemented by the introduction or company procedures that make references to the Control of discharge of residues of Noxious Liquid Substances of text in MARPOL Annex II (regulation 13), it is recommended that these company procedures or introduction of the cargo record book are amended before operation in polar water in order to reflect the operational requirements on prohibition of noxious liquid substances in polar waters.

.2 SMPEP

- Where ship companies may have tailored their documentation to include specific references to discharge limitations for specific areas, SMPEP text should be amended to refer discharge prohibition of oil or oily mixtures in Arctic waters. In this case, re-approval of SMPEP is not required.

.3 P&A Manual

- Amendments to Appendix IV (the standard format of the P&A Manual) of MARPOL Annex II are introduced to make reference to the discharge criteria in Arctic waters (the Antarctic are is already referenced). These amendments to as follows:

*Section 1 – Main Features of MARPOL Annex II*

*At the end of paragraph 1.3, the following sentence is added:*

*“In addition, under Chapter 2 of part II-A of the Polar Code, more stringent discharge criteria apply in Arctic waters.”*

*Section 4 – Procedures Relating to the Cleaning of Cargo Tanks, the Discharge of Residue, Ballasting and De-ballasting*

*In paragraph 4.4.3, the words "Antarctic area (the sea area south of latitude 60oS)" are replaced with the words "polar waters".*

- In accordance with MEPC.1/Circ.865, prior approval of the Administration may be given automatically for ships introducing modifications to paragraphs 1.3 and 4.4.3 of the manuals, this approval remains valid until the first scheduled survey. The amendments to the P&A Manual may be made by the ship staff, and then this amendment will be partly endorsed by the attending surveyor.

**(c) Regulations for the prevention of pollution by sewage from ships (MARPOL Annex IV)**

- Discharges of sewage within polar waters are prohibited except when performed in accordance with MARPOL Annex IV and the following requirements:

.1 the ship is discharging comminuted and disinfected sewage at a distance of more than 3 nautical miles any ice-shelf or fast ice and shall be as far as practicable from areas of ice concentration exceeding 1/10;

.2 the ship is discharging sewage that is not comminuted or disinfected 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;

.3 the ship has in operation an approved sewage treatment plant certified by the Administration and discharges sewage as far as practicable from the nearest land, any ice-shelf, fast ice or areas of ice concentration exceeding 1/10.

- The onboard procedures for discharging sewage need to be amended before entry into polar waters if required so as to reflect the operational requirements on prohibition of sewage in polar waters as per categories of the ships.

**(d) Prevention of Pollution by Garbage from ships**

- In Arctic waters, discharge of garbage into the sea permitted in accordance with regulation 4 of MARPOL Annex V, shall meet the following additional requirements:

.1 discharge into the sea of food wastes is only permitted when the ship is as far as practicable from areas of ice concentration exceeding 1/10, but in any case not less than 12 nautical



miles from the nearest land, nearest ice shelf, or nearest face ice;

.2 food wastes shall be comminuted or ground and shall be capable of passing through a screen with openings no greater than 25mm. Food wastes shall not be contaminated by any other garbage type;

.3 food wastes shall not be discharged onto the ice;

.4 discharge of animal carcasses is prohibited; and

.5 discharge of cargo residues that cannot be recovered using commonly available methods for unloading shall only be permitted while the ship is in route and where all the following conditions are satisfied:

- cargo residues, cleaning agents or additives, contained in hold washing water do not include any substances classified as harmful to the marine environment, taking into account guidelines developed by the Organization;

- both the port of departure and the next port of destination are within Arctic waters and the ship will not transit outside Arctic waters between those ports;

- no adequate reception facilities are available at those ports taking into account guidelines developed by the Organization; and

- Where the conditions of above 3 conditions have been fulfilled, discharge of cargo hold wash water containing residues shall be made as far as practicable from areas of ice concentration exceeding 1/10, but in any case not less than 12 nautical miles from the nearest land, nearest ice shelf, or nearest face ice.

- In the Antarctic area, discharge of garbage into the sea permitted in accordance with regulation 6 of MARPOL Annex V, shall meet the following additional requirements:

- .1 discharge under regulation 6.1 of MAPROL Annex V shall be as far as practicable from areas of ice concentration exceeding 1/10, but in any case not less than 12 nautical miles from the nearest fast ice; and

- .2 Food wastes shall not be discharge onto ice.

- Operation in polar waters shall be taken into account, as appropriate, in the Garbage Record Book, Garbage Management Plan and the placards as required by MARPOL Annex V.

.1 Garbage Record Book

- Amendments to MARPOL Annex V include amendments to the form of the Garbage Record Book. No approval is needed for ships introducing the required modifications to 4.1.3 of ships Garbage Record Book, and those modifications may be undertaken by responsible ship staff in accordance with company procedures.

.2 Placard

- Every ship of 12 meters or more in length overall, along with fixed or floating platforms, is required to display placards that notify the crew and passenger of the discharge requirements of regulation 3, 4, 5 and 6 of MARPOL Annex V and section 5.2 of part II-A of the Polar Code. Existing placards should be updated to include reference to the additional discharge limitations set out in section 5.2 of part II-A of the Polar Code before the ship enters polar waters, and these amendments do not require approval.

.3 Garbage Management Plan

- It is recommended that amendments be made to the wording of the Garbage Management Plan, and these amendments do not require approval:

1. When operating in Polar waters the garbage discharge requirements for special areas apply;
2. In addition to .1 above, when operating in Polar waters:
  - 2.1 All discharges shall be as far as practicable from areas of ice concentration exceeding 1/10, but in any case not less than 12 nautical miles from the nearest fast ice; and
  - 2.2 Food wastes shall not be discharged onto ice.

 **Actions to be taken by shipowners / operators**

Regulations for prevention of pollution mostly provide operational requirements, and revision to the relevant manual, procedure and certificate does not require approval. Therefore, owners and operators are kindly invited to update onboard manuals and procedures, etc. before entry into Polar waters so as to reflect above regulations for prevention of pollution, in particular the requirements on prohibition of discharge in relation to the operation in Polar waters.

 **Actions to be taken by surveyors**

When received an application for issuing PSC from ship owner or operator, surveyors are invited to confirm that relevant regulations for prevention of pollution in Polar water are duly reflected in onboard manuals and procedures accordingly. It is noted that the matters on the prevention of pollution, which are considered as operational requirements for owners, does not effect for issuing PSC.

Distributions : KR surveyors, Ship owners, Other relevant parties

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