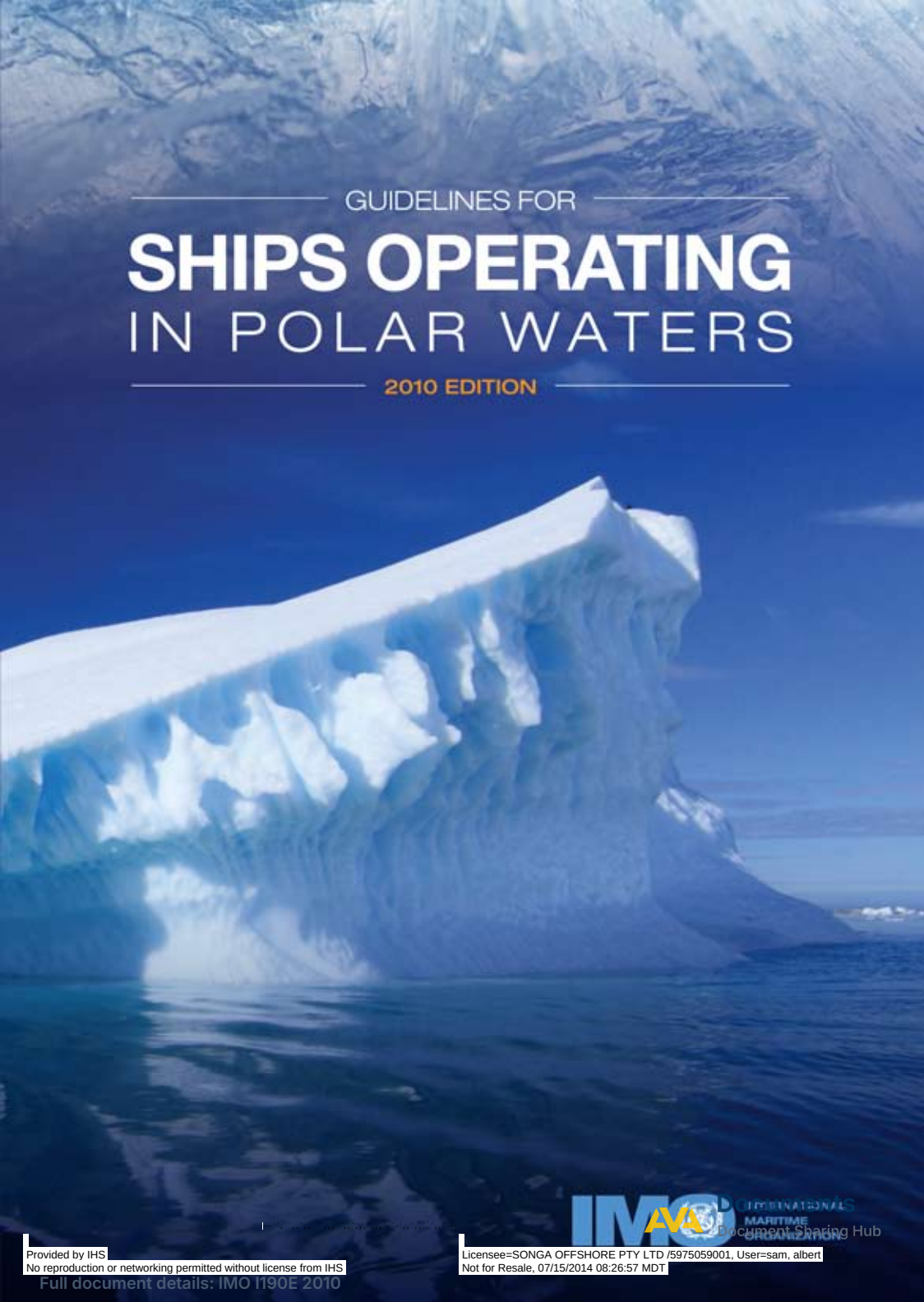




GUIDELINES FOR

SHIPS OPERATING IN POLAR WATERS

2010 EDITION

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Foreword

Over the past 20 years, IMO has developed a raft of requirements, guidelines and recommendations regarding polar ice-covered waters, concerning Arctic and/or Antarctic areas. These relate to maritime safety and prevention of marine pollution, as well as certification of seafarers on ships operating in polar areas.

Navigation in polar waters was first addressed by the Guidelines for ships operating in Arctic ice-covered waters, MSC/Circ.1056–MEPC/Circ.399, approved by the Maritime Safety Committee (MSC) at its seventy-sixth session and the Marine Environment Protection Committee (MEPC) at its forty-eighth session, both in 2002. These guidelines provide requirements additional to those of the SOLAS and MARPOL Conventions for navigation in Arctic waters, taking into account the specific climatic conditions in that area in order to meet appropriate standards of maritime safety and pollution prevention.

The MSC, at its seventy-ninth session in 2004, considered a request by the XXVIIth Antarctic Treaty Consultative Meeting for IMO to consider amending the Guidelines so that they would also be applicable to ships operating in the Antarctic Treaty Area and instructed its Sub-Committee on Ship Design and Equipment (DE) to revise the Guidelines accordingly.

At its fifty-second session in 2009, DE finalized a draft Assembly resolution on Guidelines for ships operating in polar waters, addressing both Arctic and Antarctic areas, which was approved by the eighty-sixth session of MSC and the fifty-ninth session of MEPC. The Guidelines were adopted by the twenty-sixth session of the IMO Assembly in December 2009.

The Guidelines aim at mitigating the additional risk imposed on shipping due to the harsh environmental and climatic conditions existing in polar waters. They address the fact that the polar environment imposes additional demands on ship systems, including navigation, communications, life-saving appliances, main and auxiliary machinery, environmental protection and damage control, and emphasize the need to ensure that all ship systems both are capable of functioning effectively under anticipated operating conditions and provide adequate levels of safety in accident and emergency situations. In addition, the Guidelines recognize that safe operation in such conditions requires specific attention to human factors, including training and operational procedures.



Resolution A.1024(26)
Adopted on 2 December 2009

GUIDELINES FOR SHIPS OPERATING IN POLAR WATERS

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO that, by circular MSC/Circ.1056-MEPC/Circ.399, the Maritime Safety Committee and the Marine Environment Protection Committee, recognizing the need for recommendatory provisions applicable to ships operating in Arctic ice-covered waters, additional to the mandatory and recommendatory provisions contained in existing IMO instruments, approved Guidelines for ships operating in Arctic ice-covered waters (hereinafter referred to as “the Guidelines”),

NOTING that the Maritime Safety Committee, at its seventy-ninth session, considered a request by the XXVIIth Antarctic Treaty Consultative Meeting (ATCM) to amend the Guidelines to render them applicable to ships operating in ice-covered waters in the Antarctic Treaty Area as well,

ACKNOWLEDGING that the polar environment imposes additional demands on ship systems beyond the existing requirements of the International Convention for the Safety of Life at Sea (SOLAS), 1974 and the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 Protocol relating thereto (MARPOL 73/78), as amended,

RECOGNIZING the need to ensure that all such systems are capable of functioning effectively under anticipated operating conditions and provide an adequate level of maritime safety and pollution prevention, taking into account the challenges of polar operations,

NOTING ALSO the need for a general update of the Guidelines to take account of technical, technological and regulatory developments since their approval in 2002,

CONSCIOUS OF the necessity to also give special consideration to all ships that only visit polar waters at certain times of the year,

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee at its eighty-sixth session and the Marine Environment Protection Committee at its fifty-ninth session,

1. ADOPTS the Guidelines for ships operating in polar waters, set out in the annex to the present resolution;
2. INVITES all Governments concerned to take appropriate steps to give effect to the annexed Guidelines for ships constructed on or after 1 January 2011;
3. ENCOURAGES all Governments concerned to take appropriate steps to give effect to the annexed Guidelines for ships constructed before 1 January 2011 as far as is reasonable and practicable;
4. RECOMMENDS Governments to bring the annexed Guidelines to the attention of shipowners, ship operators, ship designers, shipbuilders, ship repairers, equipment manufacturers and installers and all other parties concerned with the operation of ships in polar waters;
5. AUTHORIZES the Maritime Safety Committee and the Marine Environment Protection Committee to keep the annexed Guidelines under review and update them as necessary in light of experience gained in their application.

Preamble

P-1 Introduction

P-1.1 Ships operating in the Arctic and Antarctic environments are exposed to a number of unique risks. Poor weather conditions and the relative lack of good charts, communication systems and other navigational aids pose challenges for mariners. The remoteness of the areas makes rescue or clean-up operations difficult and costly. Cold temperatures may reduce the effectiveness of numerous components of the ship, ranging from deck machinery and emergency equipment to sea suction. When ice is present, it can impose additional loads on the hull, propulsion system and appendages.

P-1.2 Whilst Arctic and Antarctic waters have a number of similarities, there are also significant differences. The Arctic is an ocean surrounded by continents, while the Antarctic is a continent surrounded by an ocean. The Antarctic sea ice retreats significantly during the summer season or is dispersed by permanent gyres in the two major seas of the Antarctic: the Weddell and the Ross. Thus, there is relatively little multi-year ice in the Antarctic. Conversely, Arctic sea ice survives many summer seasons, and there is a significant amount of multi-year ice. Whilst the marine environments of both polar seas are similarly vulnerable, response to such challenge should duly take into account specific features of the legal and political regimes applicable to their respective marine spaces.

P-1.3 The Guidelines for ships operating in polar waters (hereinafter called “the Guidelines”) are intended to address those additional provisions deemed necessary for consideration beyond existing requirements of the SOLAS and MARPOL Conventions, in order to take into account the climatic conditions of polar waters and to meet appropriate standards of maritime safety and pollution prevention.

P-1.4 The Guidelines are recommendatory and their wording should be interpreted as providing recommendations rather than mandatory direction.

P-2 Principles

P-2.1 The Guidelines aim to promote the safety of navigation and to prevent pollution from ship operations in polar waters.

P-2.2 The Guidelines recognize that this is best achieved by an integrated approach, based on requirements in existing Conventions which cover the design, outfitting, crewing and operation of ships for the conditions which they will encounter.

P-2.3 The Guidelines take into account that Arctic and Antarctic conditions may include sea and glacial ice that can represent a serious structural hazard to all ships. This is the single most significant factor in Arctic and Antarctic operations and is reflected in many of the Guidelines' provisions.

P-2.4 The Guidelines address the fact that the polar environment imposes additional demands on ship systems, including navigation, communications, life-saving appliances, main and auxiliary machinery, environmental protection and damage control, etc. They emphasize the need to ensure that all ship systems are capable of functioning effectively under anticipated operating conditions and provide adequate levels of safety in accident and emergency situations.*

P-2.5 In addition, the Guidelines recognize that safe operation in such conditions requires specific attention to human factors including training and operational procedures.

P-2.6 The basic requirements for structure, stability and subdivision, machinery, life-saving appliances, fire protection, ship routing, navigation systems and equipment, radio communication, pollution prevention equipment, liability and safety management systems, as applicable to the different types and sizes of ships which may undertake voyages in polar waters, are obtained from the relevant Conventions.

P-2.7 The standards expressed in the Guidelines have been developed to mitigate the additional risk imposed on shipping due to the harsh environmental and climatic conditions existing in polar waters. The Guidelines should be applied taking into account the nature of the operations that are envisaged.

P-2.8 Not all ships which enter the Arctic and Antarctic environments will be able to navigate safely in all areas at all times of the year. A system of Polar Classes has therefore been developed to designate different levels of capability. In parallel to the development of the Guidelines, the International Association of Classification Societies (IACS) has developed a set of Unified Requirements which, in addition to general classification society rules, address essential aspects of construction for ships of Polar Class.†

P-2.9 The Guidelines are not intended to infringe on national systems of shipping control.

P-2.10 The Guidelines, recognizing the sensitive nature of polar waters, have the intention of providing high standards of environmental protection to address both accidents and normal operations.

* Refer to the Enhanced contingency planning guidance for passenger ships operating in areas remote from SAR facilities (MSC.1/Circ.1184).

† The Unified Requirements are available at <http://www.iacs.org.uk>.

Guide

G-1 Layout of the Guidelines

G-1.1 The Guidelines include general, construction, equipment, operational and environmental protection and damage control parts, presented in that order and subdivided into chapters.

G-1.2 This section provides definitions for important terms that are used exclusively within the Guidelines or where any term has more than one meaning in other applicable Conventions. Otherwise, terms have the meanings defined in the Convention(s) relevant to each chapter.

G-1.3 All parts and chapters of the Guidelines should be applied to Polar Class ships. All parts and chapters, with the exception of those dealing with purely construction issues (part A), should be applied to all ships in polar waters. Each chapter notes any additional differentiation of provisions between ship classes specific to that chapter.

G-1.4 Guidance provided in part A of the Guidelines is only intended for new Polar Class ships.

G-2 Key provisions

G-2.1 Only those ships with a Polar Class designation or a comparable alternative standard of ice-strengthening appropriate to the anticipated ice conditions should operate in polar ice-covered waters.

G-2.2 The combination of hull structural design, material quality, subdivision and segregation measures prescribed in the Guidelines and supporting standards should be adequate to reduce the risk of human casualties, pollution incidents or ship losses to acceptably low levels of probability during prudent operations in polar waters.

G-2.3 No pollutants should be carried directly against the shell in hull areas at significant risk of ice impact. Operational pollution of the environment should be minimized by equipment selection and operational practice.

G-2.4 Key safety-related, survival and pollution control equipment should be rated for the temperatures and other conditions which may be encountered in the service intended.

G-2.5 Navigation and communications equipment should be suitable to provide adequate performance in high latitudes, areas with limited infrastructure and unique information transfer requirements.

G-2.6 Sea suction(s) should be capable of being cleared of accumulation of slush ice.

G-3 Definitions

For the purpose of the Guidelines, unless expressly provided otherwise, the terms used have the meanings defined in the following paragraphs. Terms used, but not defined, in the Guidelines are to be interpreted as they are defined in the relevant Conventions.

G-3.1 *Administration* means the Government of the State whose flag the ship is entitled to fly.

G-3.2 *Polar waters* includes both Arctic and Antarctic waters.

G-3.3 *Arctic waters* means those waters which are located north of a line extending from latitude 58°00'.0 N, longitude 042°00'.0 W to latitude 64°37'.0 N, longitude 035°27'.0 W and thence by a rhumb line to latitude 67°03'.9 N, longitude 026°33'.4 W and thence by a rhumb line to Sørkapp, Jan Mayen and by the southern shore of Jan Mayen to the Island of Bjørnøya and thence by a great circle line from the Island of Bjørnøya to Cap Kanin Nos and thence by the northern shore of the Asian continent eastward to the Bering Strait and thence from the Bering Strait westward to latitude 60° 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 60° N and thence eastward along parallel of latitude 60° N, to longitude 56°37'.1 W and thence to the latitude 58°00'.0 N, longitude 042°00'.0 W (see figure 1).

G-3.4 *Antarctic waters* means those waters which are south of 60° S (see figure 2).

G-3.5 *Ice-covered waters* means polar waters where local ice conditions present a structural risk to a ship.

G-3.6 *COLREG* means the Convention on the International Regulations for Preventing Collisions at Sea, 1972, as amended.

G-3.7 *Company* means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the shipowner.



Figure 1 – Maximum extent of Arctic waters application (see paragraph G-3.3)*

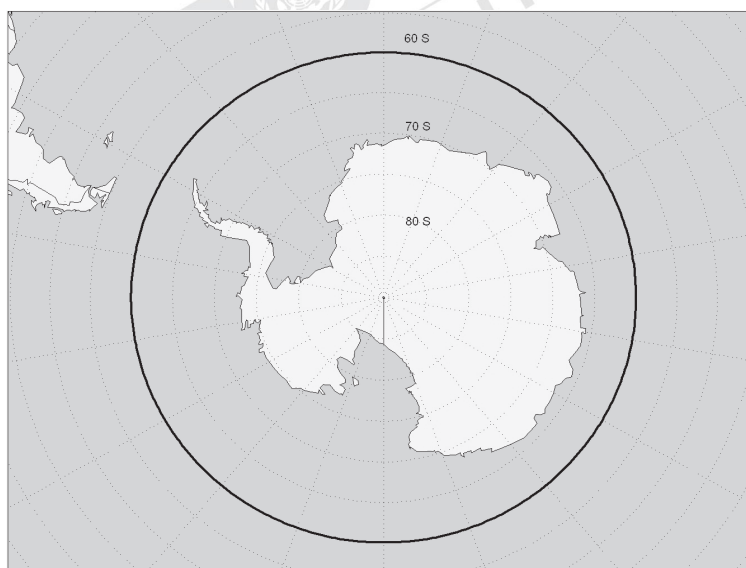


Figure 2 – Maximum extent of Antarctic waters application (see paragraph G-3.4)*

* Maps are for illustrative purposes only.

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G-3.8 *Conning position* means the stations in which the ship's steering control and devices for ahead or astern operations are located.

G-3.9 *Escort* means any ship with superior ice capability in transit with another ship.

G-3.10 *Escorted operation* means any operation in which a ship's movement is facilitated through the intervention of an escort.

G-3.11 *IACS* means the International Association of Classification Societies.

G-3.12 *Ice Navigator* means any individual who, in addition to being qualified under the STCW Convention, is specially trained and otherwise qualified to direct the movement of a ship in ice-covered waters.

G-3.13 *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.

G-3.14 *International voyages* means voyages in international waters, as defined in chapter I of the 1974 SOLAS Convention, as amended.

G-3.15 *ISM Code* means the International Management Code for the Safe Operation of Ships and for Pollution Prevention, as amended.

G-3.16 *ICLL* means the International Convention on Load Lines, 1966.

G-3.17 *MARPOL* means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 Protocol relating thereto (MARPOL 73/78), as amended.

G-3.18 *Organization* means the International Maritime Organization.

G-3.19 *Polar Class* means the class assigned to a ship based upon IACS Unified Requirements.

G-3.20 *Polar Class ship* means a ship for which a Polar Class has been assigned.

G-3.21 *Pollutant* means any substance controlled by MARPOL which, if introduced into the sea, is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

G-3.22 *Recognized organization* means an organization recognized by an Administration in accordance with IMO resolutions A.739(18) and A.789(19).