

Hull Structures of Polar Class Ships

Amended Rules and Guidance

Rules for the Survey and Construction of Steel Ships Parts A and I
Guidance for the Survey and Construction of Steel Ships Part I

Reason for Amendment

IACS Unified Requirements (UR) I1 and I2 specify general and hull structural requirements for polar class ships respectively. In order to make the URs more detailed, IACS carried out a review of each and added new requirements such as design ice loads for bows with vertical sides and bulbous bows as well as additional requirements for icebreakers, direct calculations for grillage systems, etc. These amendments were adopted as UR I1(Rev.2) and UR I2(Rev.3) in April 2016.

Accordingly, relevant requirements were amended in accordance with UR I1(Rev.2) and UR I2(Rev.3).

In addition, requirements related to the stability of polar class ships based upon the “Guidelines for ships operating in arctic ice-covered water” (MSC/Circ.1056 and MEPC/Circ.399), which is a non-mandatory guideline, were amended to be consistent with those of Polar Code Part I (Resolution MSC.385(94)).

Outline of Amendment

The main contents of the amendments are as follows:

- (1) Specified requirements for polar class ships assigned the notation “Icebreaker”.
- (2) Specified requirements for polar class ships having bows with vertical sides and bulbous bows.
- (3) Amended requirements for polar class ships related to direct calculations for load carrying stringers and web frames forming parts of grillage systems.
- (4) Amended requirements for polar class ships related to stability.

Amended Requirements

Rules for the Survey and Construction of Steel Ships

Part A: 1.2.5

Part I: 1.1.1, 1.2.1, Annex 1 1.1.1, 1.2.2, 1.2.3, Fig.1.2.3-2, Table 2.1.2-1, Table 2.1.2-2, Table 2.1.2-3, Table 2.1.2-4, 2.1.3, Table 2.1.3-1, Table 2.1.3-2, Table 2.1.3-3, Chapter 3, 4.3.2, 4.5.1

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Part I: I1.1.1, I1.1.2