
I1 Polar Class Descriptions and Application

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I1.1 Application

I1.1.1 The IACS Unified Requirements for Polar Ships apply to ships constructed of steel and intended for navigation in ice-infested polar waters, except ice breakers (see I1.1.3) *.

I1.1.2 Ships that comply with the IACS Unified Requirements I2 and I3 can be considered for a Polar Class notation as listed in Table 1. The requirements of IACS Unified Requirements I2 and I3 are in addition to the open water requirements of each member society. If the hull and machinery are constructed such as to comply with the requirements of different polar classes, then both the hull and machinery are to be assigned the lower of these classes in the classification certificate. Compliance of the hull or machinery with the requirements of a higher polar class is also to be indicated in the classification certificate or an appendix thereto.

I1.1.3 Ships that are also to receive an "Icebreaker" notation may have additional requirements and are to receive special consideration. "Icebreaker" refers to any ship having an operational profile that includes escort or ice management functions, having powering and dimensions that allow it to undertake aggressive operations in ice-covered waters, and having a class certificate endorsed with this notation.

I1.2 Polar Classes

I1.2.1 The Polar Class (PC) notations and descriptions are given in Table 1. It is the responsibility of the Owner to select an appropriate Polar Class. The descriptions in Table 1 are intended to guide owners, designers and administrations in selecting an appropriate Polar Class to match the requirements for the ship with its intended voyage or service.

I1.2.2 The Polar Class notation is used throughout the IACS Unified Requirements for Polar Ships to convey the differences between classes with respect to operational capability and strength.

* Note:

1. This UR is to be uniformly applied by IACS Societies on ships contracted for construction on and after 1 March 2008.
2. The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.

I1

(cont)

Table 1 - Polar Class Descriptions

Polar Class	Ice Description (based on WMO Sea Ice Nomenclature)
PC 1	Year-round operation in all Polar waters
PC 2	Year-round operation in moderate multi-year ice conditions
PC 3	Year-round operation in second-year ice which may include multi-year ice inclusions.
PC 4	Year-round operation in thick first-year ice which may include old ice inclusions
PC 5	Year-round operation in medium first-year ice which may include old ice inclusions
PC 6	Summer/autumn operation in medium first-year ice which may include old ice inclusions
PC 7	Summer/autumn operation in thin first-year ice which may include old ice inclusions

I1.3 Upper and Lower Ice Waterlines

I1.3.1 The upper and lower ice waterlines upon which the design of the vessel has been based is to be indicated in the classification certificate. The upper ice waterline (UIWL) is to be defined by the maximum draughts fore, amidships and aft. The lower ice waterline (LIWL) is to be defined by the minimum draughts fore, amidships and aft.

I1.3.2 The lower ice waterline is to be determined with due regard to the vessel's ice-going capability in the ballast loading conditions (e.g. propeller submergence).

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