

Main changes in BV NR 527 Rules for the Classification of Ships Operating in Polar Waters and Icebreakers - January 2021

Section 1 – General

- Clarification of applicability for POLAR CAT notation – See [1.1.3] & Table 3
- Range of operation for each POLAR CLASS and Icebreaker notation to be in accordance with IACS definition for ice description and thickness – See [2.1.1] & Table 2

Section 2 – Structural Requirements for Polar Class and Icebreaker Ships

- Correction of editorial mistakes – See Figure 3 & Table 2
- Update to be in accordance with UR I2 Rev.4 – See Symbols & Table 5 & Figure 7
- Steel grade for exposed equipment and machinery – See [2.1.4]
- Extension for material grades with thickness greater than 45 mm or 50 mm– See Table 4 & Table 5
- Material selection for stainless steel – See [2.1.6]
- Minimum throat thickness for fillet weld– See [2.2.1]
- Clarification of loads applicable to bulbous bows and non-icebreaking forms – See [4.1.6] & [4.1.7]
- Shallow water calculations for bottom area – See Note (1) in Table 12
- Brackish water definition – See Note (1) in Table 9
- Vertical ice bending moment for double-ended ships – See [5.2.2]
- Clarification of definition for b_{f-out} – See [7.4.4]
- Alignment on UR I2 for definition of number of fixed supports – See [7.5.3]
- Description of methodology for Primary Supporting Members (web frames and load-carrying stringers) with direct structural calculations – See [7.8] & [7.9]
- Increase of hull area factors for stern part in case of azimuth propulsors – See [9.2.5]

Section 3 – Machinery Requirements for Polar Class and Icebreaker Ships

- Correction of editorial mistakes – See Figure 1
- Reference to NR 584 for azimuth propulsors – See [4.2.1]
- Requirements for transverse thrusters – See [4.5]
- Rewording for clarification of symbols – See [5.2.2] & [5.2.3]

Section 4 – Ships Operating In Polar Waters (POLAR CAT)

- Correction of editorial mistakes – See [3.3.1]
- Update list of documents to be submitted for approval – See [1.3.1]
- Clarification for ice accretion and damage not due to ice collision – See Note 1 [3.3.2]
- Update to be in accordance with UI SC292 – See [3.9.2]
- Clarification for application of PROTECTED FO TANKS in accordance with POLAR CODE – See [4.1.2]

Appendix 1 – Polar Water Operational Manual (PWOM)

- No change

Appendix 2 – Method for Determining Equivalent Ice Class

- Deleted since this equivalency is applicable to existing ships and NR 527 is applicable to new constructions.