

Polski Rejestr Statków

INFORMATIVE PUBLICATION NO. 36/I

**RECOMMENDATION FOR ASSESSING ALTERNATIVE METHODS
USED IN THE HULL STRUCTURAL DESIGN OF SHIPS
SUBJECT TO THE COMMON STRUCTURAL RULES
FOR BULK CARRIERS AND OIL TANKERS**

2019

April

Publications I (Informative) are issued by Polski Rejestr Statków S.A.
as guidance or explanatory notes to PRS Rules.



GDAŃSK

Publication No. 36/I – Recommendation for assessing alternative methods used in the hull structural design of ships subject to the Common Structural Rules for Bulk Carriers and Oil Tankers – 2019 has been worked out on the basis of IACS Recommendation No.165.

The *Publication* was accepted by the Director for Ship Division on 3 April 2019.

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PRS/OP, 03/2019

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Reference Documents:

1. IACS references:
 - *IACS Recommendation No. 165* – Recommendation for assessing alternative methods used in the hull structural design of ships subject to the Common Structural Rules for Bulk Carriers and Oil Tankers (CSR-BC&OT);
 - *IACS Unified Requirement (UR) Z23*.
2. IMO reference:
 - *IMO MSC.1/Circ.1455*
3. PRS references:
 - *PRS CSR-BC&OT* (PRS version of the CSR is a direct reflection, in entirety of the IACS CSR);
 - *PRS Rules for the Classification and Construction of Sea-Going Ships, Part II – Hull*;
 - *Publication No. 81/P – Hull Surveys for New Construction*.

1 GENERAL

1.1 This *Publication* is applicable to the ships subject to the Common Structural Rules for Bulk Carriers and Oil Tankers (*PRS CSR-BC&OT*) and gives recommendations for assessing alternative methods used in the hull structural design as permitted in the applicable resolutions. The methodology is consistent with guidance developed by the International Maritime Organization, (refer to *IMO MSC.1/Circ.1455*, the Guidelines for the approval of alternatives and equivalents as provided for in various IMO instruments), while allowing for the use of simplified approaches.

1.2 The basic approach for considering equivalency involves comparing proposed alternative methods to *PRS CSR-BC&OT*, *PRS Rules for the Classification and Construction of Sea-Going Ships Part II - Hull*, as well as IACS Unified Requirements and IACS Unified Interpretations.

1.3 The responsibility for generating the equivalency request and supporting information required rests with the owner/shipyard/designer.

1.4 Review/approval of any equivalency request as well as the resulting scantlings, materials, etc. will be undertaken by PRS.

2 SCOPE OF AN EQUIVALENCY ASSESSMENT

2.1 The scope of simplified equivalency assessments is expected to be limited to materials selection and structural strength of the hull structure.

2.2 If there is not full and direct compliance to *PRS CSR-BC&OT* due to innovative designs that are not capable of being directly evaluated with the existing rules and/or resolutions, then an equivalent safety level can be accepted in accordance with guidance provided by PRS.

2.3 More detailed criteria and/or procedure for assessing alternative methods used in the hull structural design may be considered by PRS on case-by-case basis when more experience and information gained from the evaluation of alternative methods and/or novel designs are provided by owner/shipyard/designer.

2.4 When conducting simplified equivalency assessments, the guidance contained in *IMO MSC.1/Circ. 1455* should be applied to the extent possible and reported in the documentation associated with the application of alternative methods.

3 DOCUMENTATION

3.1 Documentation provided with an application for alternative methods used in the hull structural design as equivalency should identify the detail of the methods that have been undertaken, the equivalent safety level and the sufficient supporting information to validate assessments as well as the resulting scantlings, materials, etc.

3.2 In case of a ship where alternative methods are applied and an equivalency for the technical resolutions is considered by PRS, this should be noted in the relevant structural drawings and/or appropriate approval documents as required by the individual PRS procedures. The documentation on the application of alternative methods should be included in the *Ship Construction Files (SCF)* in accordance with the *PRS Publication No.81/P - Hull Surveys for New Construction*.
