

Materials used for the Principal Components of Diesel Engines, etc.

Amended Rules and Guidance

Rules for the Survey and Construction of Steel Ships Part D
Rules for the Survey and Construction of Inland Waterway Ships

Reason for Amendment

IACS adopted the Unified Requirement M72 (Rev.1) in March 2016 and it specifies requirements related to the material characteristics, non-destructive tests, surface inspections, dimension inspections and hydrostatic tests for the principal components of diesel engines. These requirements have already been incorporated into the ClassNK Rules.

Thereafter, IACS reviewed the requirements related to the material characteristics for fuel injection pumps and the high pressure fuel injection valves as well as the scope of applicability of the hydrostatic tests for cylinder blocks, and the timing of non-destructive tests for piston rods and cross heads. The results of this review were adopted as IACS UR M72(Rev.2) in January 2019.

Accordingly, relevant requirements were amended in accordance with IACS UR M72(Rev.2).

Outline of Amendment

The main contents of this amendment are as follows:

- (1) Amended the requirements for material characteristics so as to make them also applicable to fuel injection pumps as well as to high pressure fuel injection valves (including common fuel rails) and high pressure common servo oil systems whose cylinders have bores of 300 mm and below.
- (2) Amended the scope of applicability for the hydrostatic tests of cylinder blocks from cross head diesel engines to the diesel engines whose engine power exceeds 400kW/cyl.
- (3) Deleted requirements for notes to Tables D2.1 and D2.6 of Part D of the Rules for the Survey and Construction of Steel Ships, and Tables 7.2.1 and 7.2.6 of the Rules for the Survey and Construction of Inland Waterway Ships which specify that non-destructive tests (i.e. magnetic particle tests or liquid penetrant tests) be carried out again for piston rods and cross heads after their final machining.

Amended Requirements

Rules for the Survey and Construction of Steel Ships
Part D: Table D2.1, Table D2.6
Rules for the Survey and Construction of Inland Waterway Ships
Part 7 Table 7.2.1, Table 7.2.6