Rudders, Shoe Pieces and Rudder Horns

Amended Rules and Guidance

Rules for the Survey and Construction of Steel Ships Parts C and CS
Guidance for the Survey and Construction of Steel Ships Parts C and CS
Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use

Reason for Amendment

Requirements for rudders, shoe pieces and rudder horns (hereinafter collectively referred to as "rudders") are specified in IACS Unified Requirement (UR) S10. In addition, reqirements for rudders are specified in the Common Strucural Rules for Bulk Carriers (CSR-BC), which was established in April 2006, but these requirements slightly differ from those in UR S10.

To implement UR S10 for all types of ships, IACS decided to amend UR S10. IACS not only incorporated those requirements specified in CSR-BC into UR S10, but also added new requirements related to the welding, design details and alternative designs of rudders. This amendment was approved as UR S10 (Rev.4) in April 2015.

Furthermore, IACS issued a corrigenda for UR S10 (Rev.4) as UR S10 (Rev.4, Corr.1).

Accordingly, relevant requirements were amended in accordance with UR S10 (Rev.4) and UR S10 (Rev.4 Corr.1).

Outline of Amendment

The main contents of this amendment are as follows:

(1) Specifiedrequirements related to connections between rudder horns and hull structures.
(2) Specified requirements related to rudder trunks.
(3) Specified requirements related to the welding and design details of rudders.
(4) Specified requirements related to alternative designs.
(5) Amended requirements related to allowable stresses in way of cutouts.
(6) Specified requirements related to the connections of rudder blade structures with solid parts.
(7) Specified requirements related to the dimensions, push-up pressures and push-up lengths of keys with corn couplings.
(8) Amended requirements related to rudder stock bearings and pintle bearings.
(9) Specified requirements related to Type *C* rudders with rudder trunks supporting rudder stocks and Type *D* rudders with 2-conjugate elastic supports.