

The Construction of the Lower Connections of Bulwark Stays

Amended Rules and Guidance

Rules for the Survey and Construction of Steel Ships Parts C, CS and CSR-B
Guidance for the Survey and Construction of Steel Ships Parts C and CS

Reason for Amendment

Bulwarks are installed in bulk carriers and general cargo ships designed to carry lumber on deck. Cracks allegedly sustained as a result of the inflow of the hull girder bending moment have been sometimes found in the lower parts of bulwark stays.

Generally, there are 2 structural types of bulwark stays such as bracket types and gusset types. A damage investigation conducted by the Society found that almost all such cracks occurred in gusset type bulwark stays while very few occurred in bracket type stays.

Accordingly, in order to prevent such cracks, based on damage records and the results of our investigation, relevant requirements have been amended.

Outline of Amendment

- (1) A bracket type is recommended for the lower connections of bulwark stays.
- (2) Expansion joints are to be provided at appropriate intervals.
- (3) Guidance for the cases where the lower connections of a bulwark stay apply a gusset type has been stipulated in **Part C, Guidance for the Survey and Construction of Steel Ships**.
- (4) It has been stipulated in **Part CSR-B, Rules for the Survey and Construction of Steel Ships** that the construction of bulwarks is to be in accordance with **23.1.3-4 to -6** in **Part C** in addition to the requirements in **Part CSR-B**.