A Review of the Requirements for Container Carriers

Amended Rules and Guidance

Rules for the Survey and Construction of Steel Ships Part C and CS
Guidance for the Survey and Construction of Steel Ships Part C

Reason for Amendment

The late 1960's saw a rapid increase in the volume of container cargo being handled. Accompanying this increase was the use of specialized ships (i.e., container carriers) to transport such cargo. In the years since then, a large number of container carriers have been built and these ships have continued to post increasingly impressive performance and safety records year after year. Recent years have seen another upward spike in the amount of cargo being transported by sea. This has created a desire to have more efficient and economical ways to transport container cargo which in turn has led to increased emphasis being placed on the development of large container carriers.

In 1983, ClassNK established specific requirements related to the special characteristics of container carrier hull constructions (fine ship types, large cargo hatch openings in the deck, etc.) as Chapter 32 of Part C of the Rules for Survey and Construction of Steel Ships and has appropriately amended them as needed in consideration of damage feedback related to bow flare structures, etc.

However, in the time since these specialized requirements were formally established, no major review of their general requirements had been held. For this reason, ClassNK has amended the necessary requirements related to container carriers based on an examination of the corrosion and damage results of such ships and comparisons made with similar requirements of other classification societies in an attempt to make its rules more practical.

Outline of Amendment

(1) The requirements that scantlings of stiffeners based on requirements may be decided based on the concept of grouping designated sequentially placed stiffeners of equal scantlings have been specified.
(2) With regard to rule formulae for double bottom and double side construction of container carriers, corrosion addition, safety factor and load have been amended.
(3) For container carriers, with regard to the guidance for hull construction containing high tensile steel member specified in Annex C1.1.7-1 of the Guidance for the Survey and Construction of Steel Ships, rule formulae have been amended to apply on the rule directly.
(4) The requirements of fatigue strength assessment of side longitudinals and bottom longitudinals for container carrires have been specified.