

# **Anchors Used for Positioning Systems**

## **Amended Rules and Guidance**

Rules for the Survey and Construction of Steel Ships Part L

Guidance for the Survey and Construction of Steel Ships Part L

Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use

## **Reason for Amendment**

In recent years, increased attention is being paid to initiatives design to effectively utilize seabed resources and renewable energies. Offshore development using offshore structures such as FPSOs, MODUs (mobile offshore drilling units), work-ships, and wind turbine generator systems has been one of the most active areas being pursued.

Such offshore structures are provided with positioning systems designed to either fix or maintain their respective positions at designated sea areas. This can be for short periods of time as in the case of MODUs and work-ships or for long periods of time as in the case of FPSOs and floating wind turbine generator systems. Regardless of the time period involved, such offshore structures sometimes use anchor mooring systems equipped with both large welded anchors and cast steel anchors due to the relatively large holding capacities the structures require for mooring.

In consideration of these circumstances, relevant requirements related to tests and inspections to be carried out during the manufacturing of anchors used for the position mooring systems of offshore structures were added to the Rules.

Furthermore, requirements related to the approval of the manufacturing processes of anchors used to fix or position offshore structures at specific sea areas for up to 5 years and for longer than 5 years were separately specified. The latter also includes requirements related to holding capacity, fatigue strength and structural strength which take into account the effect of seabed soil and environmental conditions, etc. of the sea areas where the anchors are to be in service.

## **Outline of Amendment**

- (1) Specified requirements related to tests and inspections to be carried out during manufacturing of anchors used for position mooring systems of offshore structures
- (2) Specified requirements related to the approval of the manufacturing processes of anchors used to fix or position offshore structures at specific sea areas for up to 5 years.
- (3) Specified requirements related to the approval of anchors used to fix or position offshore structures at specific sea areas for longer than 5 years. This includes requirements related to holding capacity, fatigue strength and structural strength which take into account the effects of the seabed soil and environmental conditions, etc. of the sea area where the anchors are to be in service.