

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

## **Reason for Amendment**

- (1) The ClassNK Rules require that the materials used for the principal components (e.g. crankshafts) of the power transmissions of diesel engines such are to comply with the requirements in Part K of the Rules for the Survey and Construction of Steel Ships; the requirements in Part K are intended to ensure that product quality is uniform and were added when the requirements of IACS Unified Requirement M72 (Rev.1) for diesel engines were incorporated into the Rules.

The requirements related to the materials used for components, however, it are not clear with respect to other principal components of diesel engines unrelated to power transmissions. Such components are typically only required to satisfy recognized standards for materials such as JIS, etc. which do not apply to the material requirements for the components of power transmissions. Accordingly, relevant requirements were amended in order to clarify that the same treatment as before still is acceptable for these other components.

- (2) The ClassNK Rules currently specified that the service life of electronically-controlled diesel engine components (such as control valves, etc.) is to be at least 3 years in principle. The reason for this is based upon the premise that maintenance on these components could only be carried out (typically by manufacturers) at limited times such as during certain types of surveys.

In recent years, however, the onboard maintenance of these components by persons other than manufacturers has become more common. The Society has, therefore, been recognizing the service life stipulated by manufacturers based upon component characteristics, etc. Accordingly, requirements related to the service life of such components were amended so as to reflect recent practice.

## **Outline of Amendment**

The main contents of this amendment are as follows:

- (1) Amended relevant requirements to specify that materials in accordance with national or international standards may be used for cylinder liner parts other than the steel parts and hydraulic drives of valves, including those for pumps and actuators, in the principal components of diesel engines.
- (2) Deleted requirements specifying that the service life of control valves and accumulators with diaphragms for electronically-controlled diesel engines is to be at least 3 years.

## **Amended Requirements**

Rules for the Survey and Construction of Steel Ships  
Part D: 2.1.4, Table D2.1, 10.2.1  
Rules for the Survey and Construction of Inland Waterway Ships  
Part 7: 2.1.4, Table 7.2.1

Guidance for the Survey and Construction of Steel Ships  
Part D: Annex D2.1.1 2.1.2, 2.1.3