

# **Review of Items Monitored by Condition Monitoring and Diagnosis Systems**

## **Amended Rules**

Rules for Preventive Machinery Maintenance Systems

## **Reason for Amendment**

The ClassNK “Rules for Automatic and Remote Control Systems” applies to ships which intend to register their monitoring and control systems for periodically unattended machinery spaces. This Rules specifies requirements related to warning alarms and their detection items which indicate abnormalities in machinery operation.

In 1994, ClassNK established the “Rules for Preventive Machinery Maintenance Systems” for the purpose of developing standard requirements for condition monitoring and diagnostic systems for preventive maintenance of main propulsion machinery, etc. This Rules applies to ships wishing to register their monitoring and diagnostic systems with ClassNK and requires that general condition monitoring of items deemed necessary by ClassNK from the viewpoint of preventive maintenance as well as of items required to be detected as machinery operation abnormalities by the “Rules for Automatic and Remote Control Systems”.

In recent years, the number of ships using newly designed machinery such as electronically-controlled diesel engines, etc. has been increasing. In response, ClassNK conducted a review of requirements related to alarm detection items specified in the “Rules for Automatic and Remote Control Systems” and amended them accordingly. It is considered that requirements related to the items monitored by condition monitoring and diagnostic system sensors specified in the “Rules for Preventive Machinery Maintenance Systems” also be amended to cover such alarm detection items.

Accordingly, relevant rules were amended to reflect recent amendments made to the “Rules for Automatic and Remote Control Systems”.

## **Outline of Amendment**

- (1) Specified that the exhaust gas temperatures in turbocharger inlets and outlets, and the pressures of common accumulators for fuel oil, etc. be added to the list of items needing to be monitored by the condition monitoring sensors required for main diesel engines.
- (2) In addition to (1) above, amended other items needing to be monitored by the condition monitoring sensors required for main diesel engines, main propulsion turbines and diesel engines for generators as needed.