

Open-up Surveys of Machinery and Equipment at Planned Machinery Surveys

Amended Guidance

Guidance for the Survey and Construction of Steel Ships Part B

Reason for Amendment

- (1) The current NK Rules related to Planned Machinery Surveys require that principal components such as crankshafts, main bearings, crankpin bearings, etc. for main diesel engines are to be opened up and inspected in the presence of a surveyor in order to verify their condition.

However, due to recent advances in manufacturing technology, increasingly more reliable machinery parts are capable of being manufactured. In addition, since put the International Safety Management (ISM) Code in force, more thorough and appropriate maintenance plans have been implemented. In fact, for machinery items which, up until now, have been approved to be opened up and inspected independently by chief engineers, there is very little difference between the damage rates of items opened up in the presence of surveyors and those that are not.

Based on the above, relevant rules have been amended to allow independent open-up surveys by chief engineers on principle components of main diesel engines to be conducted without the presence of a surveyor on that the condition that open-up surveys, etc. be provided for the lubricating oil filters of such components and conducted in the presence of a surveyor to confirm the conditions of the lubricating oil respective conditions.

- (2) In recent years, there has been an increase in the number of ships using low-sulfur fuel oil as an advance environmental measure to reduce sulfur contents of diesel engine exhaust gas. However, such fuel oils have a low viscosity and, therefore, are poor lubricants. Since extended use of low-viscosity oils can lead to serious engine problems, many ships are increasingly using fuel oil coolers to lower the temperature of low-sulfur fuel oils and thus increase their viscosity as one of these countermeasures.

Accordingly, relevant rules have been amended to add fuel oil coolers as a survey item for Planned Machinery Surveys because such coolers are necessary for the stable operation of main engines.

Outline of Amendment

- (1) Relevant rules have been amended to allow independent open-up surveys of principle components of main diesel engines such as crankshafts, main bearings, crankpin bearings, crankpin bolts as well as camshafts and camshaft driving devices to be conducted by chief engineers without the presence of a surveyor on the condition the lubricating oil of such principle components be visually verified in order by surveyors through open-up surveys of lubricating oil filters at Planned Machinery Surveys.
- (2) Fuel oil coolers have been added as a survey item for Planned Machinery Surveys