

# **Propeller Shaft and Stern Tube Shaft Surveys**

## **Amended Rules and Guidance**

Rules for the Survey and Construction of Steel Ships Part B  
Rules for High Speed Craft  
Rules for the Survey and Construction of Inland Waterway Ships  
Guidance for the Survey and Construction of Steel Ships Part B  
Guidance for the Survey and Construction of Passenger Ships  
Guidance for Survey and Construction of Inland Waterway Ships

## **Reason for Amendment**

IACS Unified Requirement (UR) Z21(Rev.3) specifies that ships with oil or freshwater lubricated stern tube bearings are, in principle, subject to shaft withdrawal surveys or non-destructive testing on their propeller connections, etc. once every 5 years; the due dates of such surveys, however, may be extended provided that the integrity of the shafts is confirmed to be satisfactorily by checking the results of the periodical analysis of the oil or freshwater used to lubricate stern tube bearings as well as general examinations of the shafting system itself. The ClassNK Rules specify the same provisions, applicable from January 2016, as an alternative propeller shaft survey method (hereinafter referred to “APSS”).

In October 2015, IACS adopted Recommendation No.143, which specifies the upper limits, etc. of metallic content (taking into account that propeller and stern tube shafts are typically made of stainless steel) applicable to the periodical analysis of freshwater used to lubricate stern tube bearings. In addition, IACS also adopted UR Z21(Rev.4) in October 2015, which modifies provisions for due date extensions of the propeller shaft and stern tube shaft surveys of oil or freshwater lubricated shafts.

Accordingly, all relevant requirements were amended based upon IACS Recommendation No.143 and UR Z21(Rev.4).

Finally, since verification of the results of the periodical analysis of the oil or freshwater used for lubrication purposes is one of the conditions necessary for the extension of surveys (e.g., shaft withdrawal surveys, etc.) for ships adopting APSS, requirements were amended to specify that Society surveyors are to review management conditions on board ships where such analyses are carried out.

## **Outline of Amendment**

The main details of the amendment are as follows:

- (1) Specified upper limits, etc. of the metallic content applicable to the analysis of freshwater used to lubricate stern tube bearings.
- (2) Specified that due date extensions of a total of 30 months can be granted for APSS ships on the condition that additional reviews of relevant records and general examinations of the shafting system, etc. are carried out, even in cases where an extension of 3 months or one year has been already been granted.
- (3) Specified that the analysis records of lubricating oil or freshwater for APSS ships which perform periodical analysis of the oil or freshwater used to lubricate shafts at 6 month intervals are to be reviewed by the Society during periodical surveys, such as

Annual Surveys, etc.

**Amended Requirements**

Rules for the Survey and Construction of Steel Ships

Part B: 3.3.1, 4.3.1, 5.3.1, 6.1.3, 8.1.2, 8.1.3

Rules for High Speed Craft Part 2 3.6.1, 3.7.1, 3.8.1, 3.9.4

Rules for the Survey and Construction of Inland Waterway Ships Part 2 3.3.1, 4.3.1, 5.3.1, 6.1.3, 8.1.2, 8.1.3

Guidance for the Survey and Construction of Steel Ships

Part B: B1.1.3, B3.3.1, B6.1.3, B8.1.1, Table B8.1.3-1, Annex B1.1.3-7 2.1.2, 2.3.1

Guidance for the Survey and Construction of Inland Waterway Ships Part 2 1.1.3, 3.3.1, 6.1.3, 8.1.1, Table 2.8.1.3-1