

GUIDE FOR

HULL CONDITION MONITORING SYSTEMS

2015

15 DECEMBER 2015

NOTICE NO. 1 – March 2016

The following changes become **EFFECTIVE AS OF 1 MARCH 2016**.

(See <http://www.eagle.org> for the consolidated version of the Guide for Hull Condition Monitoring Systems, 2015, with all Notices and Corrigenda incorporated.)

Notes - The date in the parentheses means the date that the Rule becomes effective for new construction based on the contract date for construction. (See 1-1-4/3.3 of the ABS Rules for Conditions of Classification (Part 1).)

SECTION 2 SYSTEM TYPE REQUIREMENTS

2 HM2 – Stress Monitoring

2.2 Hull Girder Stress

(Revise Subparagraph 2/2.2.3, as follows.)

2.2.3 Sensors (1 March 2016)

Measurements of hull girder stresses are generally made with a number of long base strain gauges distributed along the length of the vessel and around its girth. Strain gauges for monitoring Hull Girder stresses are to be located as close as possible to locations at which the loading manual and loading instrument give bending moment results. Where the gauges cannot be sited at these locations, the method for correlating the strain gauge output to the loading manual and loading instrument locations is to be submitted for review and included in the operating manual. Where strain gauges are located in areas subject to multiple load mechanisms, means are to be provided for separating out the different stress components. For those gauges located in areas subject to shear lag, compensation is to be made for determining the primary hull girder stresses without shear lag.

Measurement signals are to be processed and displayed on the bridge for monitoring hull girder loading, and whipping and springing for fatigue damage and extreme loading.

The minimum required number and approximate position of the strain gauges are indicated below.

2.2.3(a) Tankers, Bulk Carriers and General Cargo Ships:

- 2 at midships (one port, one starboard on deck)
- 1 at 25% of the length from the bow (on deck)
- 1 at 25% of the length from the stern (on deck)

2.2.3(b) *Container Ships:*

- 2 at midships (one port, one starboard on deck)
- 1 at 25% of the length from the bow (on deck)

additional strain gauges can be provided at the discretion of the Owner or system supplier.

Vessels equipped with strain gauges for hull girder stress monitoring in compliance with 2/2.2.1 to 2/2.2.3 can be assigned an optional notation **HS**, followed by the number of gauges used. For example, **HS4** indicates four strain gauges are installed for the hull girder stress monitoring.