

GUIDE FOR

VESSELS INTENDED TO CARRY COMPRESSED NATURAL GASES IN BULK APRIL 2005

NOTICE NO. 2 – July 2007

The following Rule Changes were approved by the ABS Rules Committee on 7 June 2007 and become **EFFECTIVE AS OF 1 JULY 2007**.

(See <http://www.eagle.org/rules/downloads.html> for the consolidated version of the Guide for Vessels Intended to Carry Compressed Natural Gases in Bulk 2005 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, unless otherwise noted. (See 1-4/2.2.)

CHAPTER 3 SHIP SURVIVAL CAPABILITY AND LOCATION OF CARGO TANKS SECTION 1 FREEBOARD AND INTACT STABILITY

(Delete last sentence and Note in Subsection 3-1/6, to read as follows.)

6 Onboard Computers for Stability Calculations (1 July 2007)

The use of onboard computers for stability calculations is not a requirement of class. However, if stability software is installed onboard vessels contracted on or after 1 July 2005, it should cover all stability requirements applicable to the vessel and is to be approved by the Bureau for compliance with the requirements of Appendix 3-A1, “Onboard Computers for Stability Calculations”.

CHAPTER 3 SHIP SURVIVAL CAPABILITY AND LOCATION OF CARGO TANKS

APPENDIX 1 ONBOARD COMPUTERS FOR STABILITY CALCULATIONS (1 July 2007)

(Revise Appendix 3-A1, specifically 3-A1/Table 1 and 3-A1/6.1, as follows.)

1 General

1.1 Scope

The scope of stability calculation software is to be in accordance with the stability information as approved by the flag Administration or the Bureau on behalf of the flag Administration. The software is at least to include all information and perform all calculations or checks as necessary to ensure compliance with the applicable stability requirements.

Approved stability software is not a substitute for the approved stability information, and is used as a supplement to the approved stability information to facilitate stability calculations.

1.2 Design

The input/output information is to be easily comparable with approved stability information so as to avoid confusion and possible misinterpretation by the operator relative to the approved stability information.

An operation manual is to be provided for the onboard computer stability software.

The language in which the stability information is displayed and printed out as well as the operation manual is written is to be the same as used in the vessel's approved stability information. The primary language is to be English.

The onboard computer for stability calculations is vessel specific equipment and the results of the calculations are only applicable to the vessel for which it has been approved.

In case of modifications implying changes in the main data or internal arrangement of the vessel, the specific approval of any original stability calculation software is no longer valid. The software is to be modified accordingly and reapproved.

2 Calculation Systems

This Appendix covers either system, a passive system that requires manual data entry or an active system, which replaces the manual with the automatic entry with sensors reading and entering the contents of tanks, etc., provided the active system is in the off-line operation mode. However, an integrated system, which controls or initiates actions based on the sensor-supplied inputs is not within the scope of this Appendix.

3 Types of Stability Software

Three types of calculations performed by stability software are acceptable depending upon a vessel's stability requirements:

- Type 1 Software calculating intact stability only (for vessels not required to meet a damage stability criterion)
- Type 2 Software calculating intact stability and checking damage stability on basis of a limit curve or previously approved loading conditions
- Type 3 Software calculating intact stability and damage stability by direct application of preprogrammed damage cases for each loading condition

4 Functional Requirements

4.1 Calculation Program

The calculation program is to present relevant parameters of each loading condition in order to assist the Master in his judgment on whether the vessel is loaded within the approval limits. The following parameters are to be presented for a given loading condition:

- Deadweight data
- Lightship data
- Trim
- Draft at the draft marks and perpendiculars
- Summary of loading condition displacement, VCG, LCG and, if applicable, TCG
- Downflooding angle and corresponding downflooding opening
- Compliance with stability criteria: Listing of all calculated stability criteria, the limit values, the obtained values and the conclusions (criteria fulfilled or not fulfilled)

4.2 Direct Damage Stability Calculations

If direct damage stability calculations are performed, the relevant damage cases according to the applicable rules are to be pre-defined for automatic check of a given loading condition.

4.3 Warning

A clear warning is to be given on screen and in hard copy printout if any of the loading limitations are not complied with.

4.4 Data Printout

The data are to be presented on screen and in hard copy printout in a clear unambiguous manner.

4.5 Date and Time

The date and time of a saved calculation are to be part of the screen display and hard copy printout.