Maritime and Coastguard Agency

MARINE INFORMATION NOTE

MIN 393 (M)

Research Project RP600: Lashing at Sea

Notice to all Shipbuilders, Classification Societies, Ship Owners and ship managers, Shipmasters and Ship's Officers and Ship Safety Officials.

This MIN expires 10 May 2011

Summary

The purpose of this MIN is to advise of the publication of the report entitled "Lashing@Sea - Executive Summary".

This project was commissioned to investigate cargo securing practice and technology on RoRo ships, heavy lift and large containerships.

1. Introduction/ Background

1.1 The Lashing@Sea project was started in June 2006 with the objective of investigating cargo securing practice and technology on Ro/Ro ships, heavy lift and large container ships. In the course of the project a consortium of stakeholders including MCA was brought together to address the topic of cargo securing taking into account all relevant interests from safety to efficiency and from design rules to onboard procedures.

2. Project objectives

- To make lashing systems more effective;
- To increase lashing systems efficiency; and
- To minimise the risk of damage to the environment.

3. Project conclusions

3.1 Accelerations in ships are dominated by:

- Extreme roll motions for transverse loads;
- Pitch / heave and impulsive wave loads for vertical loads;
- Rigid body response for smaller ships; and
- Dynamic amplification for larger container ships due to hull flexibility.

3.2 On the design aspect it was found that effects by flexible hull response and container row interaction are not included in the design models and this can result in the actual securing loads and stack loads being far greater than anticipated.

3.3 On the operational side two aspects were considered; the effects of continuous operational relevance (design quality) and the vessel's handling in severe weather (sea keeping).

4 Publication of the final report on the MCA's website

4.1 The final report can be found in the MCA website (www.mcga.gov.uk).
Search under "Lashing@Sea Project".

4.2 MCA advises the industry to follow the recommendations in the report as appropriate.

4.3 Existing design and safety margins are based on the response of a rigid body of a vessel in combination with a single isolated stack. These should be evaluated accordingly for higher loads.

4.4 Maintenance and survey procedures of lashing gear and deck fittings should be improved in order to recognise degradation and malfunctions.

4.5 Container vessel crew's should recognise any developing hazardous situations and avoid extreme rolling and slamming.

More Information

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File Ref: MS 116/059/0003

Published: May 2010
Please note that all addresses and
telephone numbers are correct at time of publishing

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An executive agency of the Department for Transport

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