

MARITIME SAFETY COMMITTEE
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Agenda item 12

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DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS

Bulk carrier casualties caused by cargo liquefaction

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SUMMARY

Executive summary: This document comments on document MSC 90/12 (Secretariat), concerning the report of the sixteenth session of the DSC Sub-Committee, and urges early utilisation of measures to control the moisture content of Group A cargoes, as agreed at DSC 16 for inclusion in the next set of amendments (02-13) to the IMSBC Code, in advance of their mandatory application on 1 January 2015

Strategic direction: 5.2

High-level action: 5.2.3

Planned output: 5.2.3.3

Action to be taken: Paragraph 15

Related documents: MSC 89/7/4; DSC 16/WP.3 and MSC 90/12

INTRODUCTION

1 This document comments on document MSC 90/12 (Secretariat), concerning the report of the sixteenth session of the DSC Sub-Committee, and is submitted in accordance with paragraph 6.12.5 of the Guidelines on the organization and method of work of the Committees (MSC-MEPC.1/Circ.4).

2 This document informs the Committee of a further loss of a bulk carrier, the **Vinalines Queen**, which was engaged in the transportation of nickel ore with the loss of 22 lives, and urges early utilization of measures to control the moisture content of Group A cargoes as agreed at DSC 16 for inclusion in the next set of amendments (02-13) to the IMSBC Code.

BACKGROUND

3 A number of vessels carrying nickel ore sank at the end of 2010 (**Jian Fu Star**, **Nasco Diamond** and **Hong Wei**) with the loss of 45 lives. On 25 December, a further ship, the **Vinalines Queen**, sank bringing the losses associated with nickel ore liquefaction during a 15 month period to four ships and 67 lives lost.

4 It is widely acknowledged that nickel ore is a cargo that can liquefy if the moisture content of the cargo exceeds the Transportable Moisture Limit (TML) and that this can lead to a sudden loss of stability and the vessel capsizing. Although in the latest case the cause of the sinking has not yet been formally determined, China's submission (MSC 89/7/4) to the Committee in March 2011 in relation to the first three vessels lost stated that:

"China, as the country of nationality of the 45 seafarers [who lost their lives], carried out the investigation immediately after the accidents. In view of the fact that the subject ships had sunk and the difficulty to obtain cargo samples from the port of loading, the investigation was mainly based on the interviews with the surviving seafarers.

According to the evidence available, the direct cause of these accidents was the loss of stability as a result of cargo liquefaction and shifting in bad weather. However, the cargo documentation provided to the masters indicated that the moisture content of the cargo samples was lower than the Transportable Moisture Limit (TML)".

5 Given the number of incidents and lives that have been lost, the co-sponsors are committed to working closely with all stakeholders to ensure all parties involved in the transportation of these cargoes give the highest priority to the safety of crew who serve aboard the ships carrying nickel ore cargoes.

6 Nickel ore is not yet listed in the IMSBC Code, accordingly it falls within the scope of paragraph 1.3 of the Code which deals with "Cargoes not listed in the Code" and should be carried as a Group A cargo under the provisions of section 7 and 8 of the Code. Discussions are taking place within the Organization to determine how the IMSBC Code can be amended to improve the safe carriage of nickel ore cargoes. A draft schedule for Nickel Ore was extensively discussed at E&T 17 and forwarded to DSC 17 for finalization.

7 The co-sponsors suggest early utilization of measures to control the moisture content of Group A cargoes, as agreed at DSC 16 for inclusion in the next set of amendments (02-13) to the IMSBC Code (DSC 16/WP.3, annex 1), will address the concerns relating to the storage and loading, the potential hazards involved in the carriage of Group A cargoes, and specifically nickel ore cargoes.

DESIGNATION OF A NATIONAL COMPETENT AUTHORITY

8 Under the IMSBC Code, States party to SOLAS 1974, are invited to provide the names and addresses of the offices of the designated National Competent Authority (NCA) responsible for the safe carriage of grain and solid bulk cargoes. Some countries do not list an NCA in the latest IMO circular (IMO BC.1/Circ.68) listing the names and addresses of NCAs. The co-sponsors believe it is important that all Governments introduce measures to ensure the effective policing of standards in order to ensure that the provisions of the Code are adhered to, including the designation of an NCA.

LABORATORIES AND SURVEYORS

9 Without good quality test results, the information and documentation, which the shipper provides under Section 4.2 of the IMSBC Code in respect of Group A cargoes, most notably the Flow Moisture Point/Transportable Moisture Limit (TML) and Moisture Content, will be unreliable. As a result, the co-sponsors believe that there is a need to implement the principles agreed at DSC 16 which include ensuring "the competent authority ... operate(s) independent(ly) from the shipper" (amendment to section 1.7.7) and that the signed

certificate of the TML, and certificate or declaration of the moisture content, is issued "by an entity recognized by the Competent Authority of the port of loading" (amendment to 4.3.2).

10 There have been a number of reports of surveyors/experts, appointed on behalf of vessel interests to take cargo samples and conduct independent testing, being subject to extreme pressure by shippers to accept the results of tests carried out by the mines or existing laboratories and being refused access to stockpiles. This is unacceptable and shippers must "... facilitate access to stockpiles for the purpose of inspection, sampling and subsequent testing by the ship's nominated representative" (new paragraph 4.4.3).

IMPROVED STOCKPILE MANAGEMENT

11 To ensure cargo is loaded in an appropriate and safe condition, procedures should be developed by the shipper and approved by the NCA in line with the new paragraph 4.3.3 of the Code:

"When a concentrate or other cargo which may liquefy is carried, procedures for sampling, testing and controlling moisture content to ensure the moisture content is less than the TML when it is onboard the ship shall be established by the shipper, taking account of the provisions of this Code. Such procedures shall be approved and their implementation checked by the competent authority of the port of loading. The document issued by the competent authority stating that the procedures have been approved shall be provided to the master or his representative."

12 In addition, when barges are used in the transport to and loading of ships the new paragraph 4.3.4 should be followed:

"If the cargo is loaded on to the ship from barges, in developing the procedures under 4.3.3 the shipper shall include procedures to protect the cargo on the barges from any precipitation and water ingress."

13 Such procedures may include: protecting the cargo when carried by trucks or barges by fully covering with tarpaulins; the provision of covered storage facilities, or at least ensure every cargo is fully covered by a waterproof tarpaulin(s) thereby reducing the opportunity for moisture content to increase; and appropriate measures (including large areas of flat, well-drained land set aside for breaking large stock piles into smaller piles that can be regularly turned) to allow for the drying of those cargoes that have an unacceptably high moisture content.

CONCLUSION

14 The co-sponsors urge all Member States to implement measures to control the moisture content of Group A cargoes, as agreed at DSC 16 for inclusion in the next set of amendments (02-13) to the IMSBC Code, as soon as possible in advance of their mandatory application on 1 January 2015.

ACTION REQUESTED OF THE COMMITTEE

15 The Committee is invited to consider the above comments and proposals and decide, as appropriate.
