

# No. 24 2010/2011 - India - Safe Shipment of Iron Ore Fines from Indian Ports

December 2010

Dear Sirs

## India - Safe Shipment of Iron Ore Fines from Indian Ports

Translations: Chinese  Vietnamese 

### Introduction

As Members may be aware, in 2009 two ships, the 'Asian Forest' and the 'Black Rose', capsized and sank following the liquefaction of iron ore fines cargoes which they had loaded in the Indian ports of Mangalore and Paradip. There have been other incidents of liquefaction, particularly when loaded during or after the Indian monsoon season, resulting in ships becoming unstable and being forced to seek refuge.

In other cases cargoes loaded have been found to have a moisture content in excess of the Transportable Moisture Limit (TML) prior to the vessel's departure and the ships in question have been prevented from sailing by the local port authorities until the situation has been rectified, leading to substantial delays.

The Indian Government through the Ministry of Shipping, Directorate General of Shipping (DGS) conducted inquiries into the sinking of the ships and established a Committee to look into the safe loading and carriage of iron ore lumps and fines from Indian ports. The DGS has issued a number of Merchant Shipping Notices, the latest of which is M Notice No.9 of 2010, dated 27 August 2010. The International Group is in dialogue with the DGS on a number of issues arising from the M Notices and how they relate to the International Maritime Solid Bulk Cargoes (IMSBC) Code. M Notice No.9 is being made law in India as part of the new Carriage of Goods Regulations.

The Indian Government also submitted a report to the 87th session of the IMO Maritime Safety Committee (MSC) in May 2010 reporting on the findings of its investigation into the two casualties and the actions that the Indian authorities had taken following the casualties together with various recommendations relating to the carriage of iron ore fines. The report was considered by the 15th session of the Sub-committee on Dangerous Goods, Solid Cargoes and Containers (DSC) in September 2010. The DSC issued a Circular DSC.1/Circ 63 which set out a number of conclusions and recommendations relating to the carriage of iron ore fines.

In view of the incidents referred to it is most important that Members ensure that all local and international requirements including those under the IMSBC Code, relating to the loading, stowing, carriage and discharge of iron ore lumps and fines cargoes loaded at Indian ports are fully complied with.

### International Maritime Solid Bulk Cargoes (IMSBC) Code

The IMSBC Code is issued under SOLAS 1974 and its Protocols, which have been incorporated into the Indian Merchant Shipping Act 1958 (as amended). The Code sets out the internationally agreed provisions for the safe stowage and

shipment of solid bulk cargoes, including cargoes that may liquefy, such as iron ore fines. Those cargoes not specifically listed are covered by Section 1.3 of the Code. The IMSBC Code is currently advisory but becomes mandatory internationally on 1 January 2011. However in India it is already mandatory by virtue of M Notice No.9.

SOLAS 1974, Regulation VI/2 requires the shipper to provide the master or his representative with all relevant information relating to the cargo sufficiently in advance of loading to enable precautions which may be necessary for the proper stowage and safe carriage of the cargo to be put into effect.

Section 4 of the IMSBC Code sets out the obligations and responsibilities imposed on the shipper for providing information about the cargo. Most importantly for cargoes that may liquefy (Group A cargoes), test certificates shall be provided by the shipper prior to loading evidencing the moisture content and the TML of the cargo. For cargoes of iron ore fines, the TML is defined in the IMSBC Code as 90% of the Flow Moisture Point (FMP). The FMP can only be determined by laboratory analysis of cargo samples. Any cargo with a moisture content in excess of the TML should not be accepted for loading (unless on specially constructed or fitted ships).

Iron ore fines does not have its own schedule in the IMSBC Code but should be regarded as being a Group A cargo.

## **Master's Obligations**

The master or his representative should monitor the loading operation from start to finish. Loading should not be commenced until the master or the ship's representative is in possession of all requisite cargo information in writing as described above. The master has an overriding authority under SOLAS not to load the cargo or to stop the loading of the cargo if he has any concerns that the condition of the cargo might affect the safety of the ship.

## **Shipper's Obligations**

### *Cargo Information*

The shipper must provide the master or his representative with all information and documentation required under the IMSBC Code in writing in sufficient time before loading to enable the precautions which may be necessary for the proper stowage and safe carriage of the cargo to be put into effect. (IMSBC Code, Section 4.2.1).

### *Documentation*

The documentation must include:

- A certificate/declaration certifying the moisture content of the cargo loaded in each of the ship's holds together with a statement that to the best of the shipper's knowledge the moisture content is the average moisture content of the cargo
- A certificate certifying the TML of the cargo together with the FMP test result prepared by a competent laboratory

The IMSBC Code requires that the interval between testing for the Flow Moisture Point (FMP) and loading be no more than 6 months for regular materials unless the production process is changed in any way. The interval between testing for the moisture content and loading shall never be more than 7 days. However with irregular materials such as iron ore fines every shipment should be checked. If there is significant rain between the time of testing and the time of loading the shipper must conduct test checks to ensure that the moisture content of the cargo is still less than its TML (IMSBC Code, Sections 4.5.1 and 4.5.2).

Masters should be wary of test certificates provided by the shipper's laboratory and moisture content percentages that are very close to the TML.

### *Laboratories*

The shipper must identify the laboratory used to conduct the tests on the cargo samples. It is recommended that masters check with the local correspondents/appointed surveyors to ensure that the laboratory is reputable and competent. The number of such laboratories in India is currently very limited.

### *Stockpiles*

The shipper must identify the stockpiles from where the cargo is to be loaded and confirm in writing that the samples tested, and in respect of which certificates have been issued/declarations made, originated from those stockpiles.

### *Barges*

Where barges are used to transport cargo to the ship they must be capable of being individually identified by the master/ship/appointed surveyor.

## **Problems encountered with the shipment of iron ore fines from India**

It is understood that Members have encountered a number of problems with shipments of iron ore fines from India, including:

- Certificates and declarations not being provided
- Inaccurate moisture content and TML certificates, resulting in unsafe cargo being presented for shipment
- Cargoes being mis-described to avoid the application of the IMSBC Code
- Iron ore fines not being declared as Group A cargo
- Commercial pressure on masters not to delay shipment and to carry cargoes without the provision of accurate certificates
- Restrictive clauses in charter parties
- Cargo not being stockpiled but delivered straight from the mine
- Only one certificate being provided when there is more than one distinct source of cargo
- Moisture content certification being over 7 days old

## **Precautions**

1. Loading should not be commenced until the master is in possession of all requisite cargo information and documentation/certificates that a shipper is obliged to provide under the IMSBC Code or local regulations and is satisfied that the cargo is safe to load and carry.

2. Following consultation with the Managers, appoint a surveyor on behalf of the ship in advance of loading to assist the master. It may in any event be a local requirement to do so. However, it should be made clear to the port and competent authorities, shippers and charterers that the appointment of a surveyor by the ship is not intended to and does not relieve the shipper of his obligations under the IMSBC Code or local regulations. The terms of the surveyor's appointment should include the following:

- To assist the master with compliance with his obligations under the IMSBC Code and local regulations
- To contact and liaise with shippers to identify the stockpiles from which the cargoes are to be shipped on the subject vessel and to ensure that representative samples are taken correctly in accordance with Sections 4.4 and 4.6 of the IMSBC Code
- To take owners' own representative samples for testing in an independent competent laboratory

- To liaise with an independent expert to ensure that the independent competent laboratory conducts its tests in accordance with Appendix 2 of the IMSBC Code
- To compare the shipper's certificates with owners' own test results for TML and moisture content. Masters should be wary of moisture content certificates provided by the shipper's laboratory and moisture content percentages that are very close to the TML.
- To monitor the loading operation from start to finish, paying particular attention to the weather conditions and the presence of any moist cargo, particularly in barges
- To monitor the stockpiles and/or barges to ensure that the cargo presented for shipment is from the designated and tested stockpiles and/or barges. This will involve keeping a careful tally and identification of barges offered for loading
- To ensure loading is suspended during periods of rain and that the hatch covers are closed
- To carefully examine cargo offered for loading from uncovered barges and stockpiles and conduct 'can' tests, particularly when rain has been experienced. The 'can' test is described in Section 8.4 of the IMSBC Code as a spot check that the Master may carry out to approximately determine the possibility of flow. However, "can" tests are not meant to replace or supersede laboratory testing which is the responsibility of the shippers. Section 8.4 states that if the sample shows signs of liquefaction (ie if free moisture or a fluid condition appears), arrangements should be made to have additional laboratory tests conducted on the material before it is accepted for loading. Nevertheless, cargo should never be accepted on the basis of 'can' tests alone. Such tests may indicate that the cargo is unfit for shipment but cannot confirm that a cargo is fit to be loaded. This can only be determined by laboratory testing
- To stop loading if the cargo presented for shipment appears to be moist, or if moisture is observed following a "can" test

3. If the master or his appointed surveyor is presented with any document seeking their confirmation that the cargo is safe to carry they should refuse to sign it. The obligation under the IMSBC Code is for the shipper to declare that the cargo is safe to carry and signing such a document could prejudice a Member's rights of recourse against a shipper in the event of a subsequent casualty.

4. Report any commercial pressure to the Managers so that this may be taken up by the International Group with the DGS.

5. Members should consider how they might protect themselves contractually before agreeing to carry iron ore fines cargoes, eg by including an appropriate clause in any charter party. Equally Members should not be pressurised into entering into charter parties which restrict their right to fully apply the provisions of the IMSBC Code, appoint independent surveyors and experts of their choice or take and test cargo samples.

6. Members should refer to the Managers any contractual and/or safe carriage concerns they may have relating to iron ore lumps and fines loaded in India.

## **Consequences of a Member's failure to comply with the IMSBC Code**

The risks of loss of life, damage to the environment and loss of property are only too apparent, but if a Member fails to comply with the IMSBC Code and/or local regulations they should also be aware that they might be prejudicing Club cover. All Group Clubs have similar Rules which in essence exclude cover for liabilities, costs and expenses arising from unsafe or unduly hazardous trades or voyages.

All Clubs in the International Group have issued a similar Circular.

## **Important**

Members must contact the Managers on fixing or chartering a vessel to a cargo of load iron ore fines from India so that a local surveyor can be appointed immediately. If the cargo is already stockpiled, it may be possible to arrange for samples to be taken and sent to a competent independent laboratory to be tested prior to the vessel's arrival. However, the possibility of delay cannot be ruled out, particularly if the Managers are not notified well in advance or if the cargo is still in the process of being mined. If the independent tests indicate that the moisture content exceeds the TML, or if samples fail a "can" test prior to or during loading, or in the event of any other concerns the involvement of an expert will be required.

Members must also take care to ensure that express terms are included within the charter party, contract of affreightment or other contract (as applicable) so as to safeguard their position, and should contact the Club's Claims department for further advice before entering into such a fixture or charter.

Yours faithfully

For: **West of England Insurance Services (Luxembourg) S.A.**  
(As Managers)

**M W H Williams**  
Director

This Notice to Members is also available in Chinese and Vietnamese.