



Friday 10th December 2010

Bulletin 729 - 12/10 - Safe Shipment of Iron Ore Fines - India

(International Group Circular)

As Members may be aware in 2009 two ships, the 'Asian Forest' and the 'Black Rose', capsized and sank following 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 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 27th August 2010. The 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 Code (the 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 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 Code (IMSBC Code)

The 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. It 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.

Regulation VI/2, SOLAS 1974 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), certificates should be provided evidencing the moisture content of the cargo at the time of shipment and the transportable moisture limit (TML). The TML is defined in the 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 Code but should be regarded as being a Group A cargo.

(A) 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.

(B) Shipper's Obligations

(1) Cargo Information

The shipper must provide the master or his representative in writing with all information and documentation required under the Code in sufficient time before loading, to ensure that the cargo can be safely loaded onto, carried and discharged from the ship (section 4.2.1).

(2) Documentation

The documentation must include:

(a) 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.

(b) a certificate certifying the TML of the cargo together with the FMP test result prepared by a competent laboratory.

The 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 and 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. 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. If there is significant rain between the time of testing and the time of loading the shipper must conduct test checks (section 4.5.2) to ensure that the moisture content of the cargo is still less than its TML.

(3) 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.

(4) Stockpiles

The shipper must identify the stock piles from which 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 stock piles.

(5) 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:-

- Cargoes being mis-described to avoid application of the Code
- Iron ore fines not being declared as Group A cargo.
- Certificates and declarations not being provided.
- Inaccurate moisture content and TML certificates, resulting in unsafe cargo being presented for shipment.
- 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 stock piled but delivered straight from the mine
- Only 1 certificate being provided when there is more than 1 distinct source of cargo
- Moisture content certification being over 7 days old

Recommended 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 Code or local regulations and is satisfied that the cargo is safe to load and carry

2. Following consultation with the Association, 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 Code or local regulations.

The terms of the surveyor's appointment should include the following:

(a) To assist the master with compliance with his obligations under the Code and local regulations.

(b) 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 correctly taken in accordance with sections 4.4 and 4.6 of the Code

(c) To take owners' own representative samples for testing in an independent competent laboratory.

(d) To liaise with an independent expert to ensure that the laboratory conducts its tests in accordance with Appendix 2 of the Code.

(e) 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. If there is significant rain between the time of testing and the time of loading the shipper must conduct test checks

(f) 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.

(g) To stop loading if further moisture and/or can tests are conducted, as necessary, on any parts of the cargo presented for shipment (sections 4.5.2 and 8.4 of the Code).

(h) 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.

(i) To ensure loading is suspended during periods of rain.

(j) To carefully examine cargo offered for loading from uncovered barges and if in any doubt of the moisture content conduct 'can' tests particularly when rain has been experienced. The 'can' test is described in section 8 of the IMSBC Code as a spot check a Master can conduct if he is suspicious of the condition of the cargo, and is not meant to replace or supersede laboratory testing which is the responsibility of the Shippers. Section 8 states that if the sample shows signs of liquefaction - i.e. flat surface with evidence of free moisture, 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 the 'can' test alone. The test may indicate if cargo is unfit for shipment but cannot determine if a cargo is fit to be loaded— this can only be determined by laboratory testing.

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 Code is on 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 Association so that this may be taken up by the Group with the DGS.

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

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

Consequences of a Member's failure to comply with the 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 Code and / or local regulations they should also be aware that they might be prejudicing Club cover. All of the Group Clubs have similar Rules which in essence exclude cover for liabilities, costs and expenses arising from unsafe or unduly hazardous trades or voyages.

Source of information: International Group of P&I Clubs