

Lessons to be learned

Deliberate grounding due to shift of liquefied cargo

What happened?

The vessel loaded 20000 MT iron ore fines in New Mangalore, India. The ship departed and only a few nautical miles outside the port the vessel started to develop a list. The list continued to increase and the Captain decided intentionally to run the ship aground intentionally to avoid capsizing.

What was the result?

- Costly salvage operation under Lloyds Open Form
- Minor dents to the hull
- 6 weeks off hire

Why did it happen?

The cargo is stored without protection and often taken out of the mines with substantial moisture. Due to rain the wetness of the cargo increases. These types of cargo are described in the BC Code as Group A cargoes. A cargo in Group A shall be tested and given a transportable moisture limit (TML) certificate. The following are some of the causes of this grounding

- Either the TML certificates nor the certificates of moisture content were presented or checked
- The cargo was not properly tested prior to loading and during loading
- The high moisture content combined with vibrations of the main engine cause the cargo to liquefy
- The liquefied cargo started to shift shortly after departure
- Due to the list the cargo continued to shift and the list increased even more
- To protect the ship from capsizing the Captain grounded the ship about 3 nm outside the port of loading

What can we learn?

- Every cargo that contains moisture and at least some fines and small particles should be queried prior to loading, The BC Code certification requirements apply to all cargoes which may liquefy regardless of whether or not the cargo is specifically identified as posing a liquefaction risk. Never assume there is no risk of liquefaction simply because a cargo is not identified as 'Group A' in the BC Code
- When considering the carriage of Group A cargoes and other cargoes that risk liquefying owners should seek from charterers assurance that the certificates of moisture content and TML will be made available prior to shipment
- If these certificates are not available at the load port, then the Captain should consider refusing the cargo and immediately notify owners, who in turn should contact the Club for advice
- Any certificates provided should be checked to ensure that they are from a reliable source. These certificates may be issued by the mining company and are therefore subject to risk of incorrectness



- Where possible, ship's staff should closely examine the condition of the cargo before it is loaded, and should closely monitor its condition throughout loading and whenever it is brought alongside the vessel. Even when the cargo appears to be dry, it may still contain moisture in excess of TML, but if it appears wet, or is stored in open conditions in rainy weather, then experience indicates that moisture content may well be above TML
- A negative result from a *can test* described in section 8.3 of the BC Code (i.e. no free moisture or fluid condition is seen) does not necessarily mean that the cargo is safe for shipment. However, a positive result from such test, where moisture is seen, should leave the Captain in no doubt that further testing is required
- In all circumstances shipmasters and owners should closely follow the recommendations contained in the BC Code (latest edition, 2005)
- In the rainy season pre-loading and loading surveys is recommended to be carried out
- The main areas of concern are; India, China, Philippines, Indonesia, New Caledonia and other areas adjacent to these. However, members are recommended to exercise caution when loading such cargoes irrespective of area
- If in any doubt, do not hesitate to contact the Club for advice.

