

Passing the can test on nickel ore cargoes

StopLoss 42 (May, 2006) featured an article by Brookes Bell Jarret Kirman which highlighted the propensity to liquefy of nickel ore mined in Indonesia and the Philippines.

The Club has since received reports of incidents in which ships have faced severe stability problems as a result of liquefaction almost immediately on sailing from the load port. In one case, the ship capsized within 48 hours of departure.

Identifying the risk of liquefaction is clearly of vital importance for safe carriage, and the Code of Safe Practice for Solid Bulk Cargoes (BC Code) sets out the standard methods of determining the Flow Moisture Point of

... into this, and the cargo may therefore be unfit for shipment



Striking on a hard surface a can containing a sample could turn this ...

cargoes which may liquefy. However, those test procedures were developed primarily for homogenised metal concentrates, whereas nickel ore is not homogeneous and is largely composed of a clay-like material mixed with harder lumps of various sizes.

Moreover, metal concentrates have a typical moisture content of about ten per cent, whereas nickel ore often has a moisture content in the range of twenty-five to forty per cent.

Several recent expert reports emphasise that the difference in the characteristics between nickel ore and a metal concentrate means that great care is required when testing nickel ore to

maximise the prospect of obtaining accurate data on the Flow Moisture Point.

Yet some exporters appear to rely on imprecise test procedures which can lead to an inaccurate description of the true flow characteristics.

The Club has seen several recent cases in which owners have challenged documentation provided by shippers which purported to confirm that the cargo was safe for shipment.

In each case where there was doubt as to the condition of the nickel ore, the 'can test' proved to be a useful method of obtaining an early indication of the possibility of cargo flow. And in some instances, following further advice from experts and - where appropriate - independent laboratory testing, the cargoes were rejected as being unfit for shipment.

Members considering carriage of nickel ore should be very cautious about relying on the shippers' documentation alone, and are reminded that guidance on how to conduct the can test is set out in Section 8 of the BC Code.

StopLoss 42 is available for download from www.liso.com, and members should also monitor the London Club website for further updates on this issue.

IN THIS ISSUE



Closing the loop

Health check warning

Incompatible cargoes alert

Vietnam rainy season

Vessels and narrow channels

Smoke without fire



Closing the loop



A recent report on a grounding published by the Australian Transport Safety Bureau provides a stark reminder of how a serious casualty can arise as a result of even the most basic 'single-person error'. The vessel in question was outward-bound from a river berth following what the ATSB described as "a particularly difficult pilotage ... with some critical turns" in a narrow and hazardous channel. The bridge team consisted of a pilot, the master, the third mate and a helmsman.

On commencing the passage, the pilot found that the ship was slow to start a turn and slow to respond to the helm once turning. As the vessel was making a crucial course alteration, the pilot - who was watching only the ship's head - wished to increase the rate of turn to port, and asked for "Port 10". The helmsman, however, applied "Starboard 10".

As the pilot became quickly and increasingly concerned about first the rate and then the direction of turn, he asked firstly for "Port 20" and then

"Hard-a-port" but, in fact, an increasing amount of starboard helm was applied.

The helmsman's mistakes were only identified when the pilot checked the rudder indicator and the wheel was then quickly put hard over to port. However, the late correction was not enough to enable the ship to make the turn and it grounded heavily shortly thereafter, causing substantial damage to the bow.

The critical nature of the turn is emphasised by the ATSB finding that the bridge team had only "about thirty seconds" in which to identify and correct any error on the helm before grounding became inevitable. In such circumstances, the ATSB was critical of the pilot's failure to follow the convention of giving hand signals to augment helm orders. Also, the value was emphasised of 'closing the loop' when communicating helm orders, which means simply that the helmsman should immediately repeat back the helm order to the pilot, then confirm what helm has been applied, following which the pilot should then

repeat that back as an acknowledgment. It seems very likely that the casualty would have been avoided if the bridge team had monitored the helmsman.

Members are reminded that the International Chamber of Shipping's Bridge Procedures Guide emphasises that "verbal orders from the pilot will need to be checked to confirm that they have been correctly carried out. This will include monitoring both the rudder angle and helm indicators when helm and engine orders are given".

www.astb.gov.au

Health check warning

The Club has seen several reports which underline the importance of care in the selection of clinics for the performance of crew pre-employment medical examinations (PEME). In each case, a crew member was diagnosed with a serious physical or psychological disorder which was supposed to have been the subject of a targeted test during the PEME. Even though the seafarers had been passed as fit, the Club subsequently received medical advice that the conditions would have been readily apparent if the claimed tests had been conducted properly.

This issue will receive further attention in StopLoss but, in the meantime, members are urged to satisfy themselves as to the reliability and availability of testing resources at the clinics at which their crew are examined.



Incompatible cargoes alert

The carriage of steel products and plywood from the Far East (typically Indonesia and Malaysia) to US and North European ports is a relatively common trade. The steel is almost always loaded on the bottom of each hold and then overstowed with plywood.

As a general rule, this combination of cargoes is unproblematic. However, the Club has seen claims for rust damage to steel products which have been over-stowed with timber products which have a significantly higher moisture content than plywood.

In one case, the charterers' voyage instructions were that the vessel was fixed to load "timber/timber products including plywood" over hot rolled steel plates. On arrival at the timber loading port, the master quickly became aware that the majority of the cargo was sawn timber which had not been air- or kiln-dried prior to shipment. This 'green wood' clearly had a high moisture content, and the master challenged the charterers as to whether it was compatible for stowage with the steel already in the

holds. His concern was that the timber would give off moisture during the long sea passage, which would then condense on the side shell plating and run down to the tank top. And the charterers were put on notice that their dunnage under the steel plates was a softwood which would tend to absorb the ship's sweat, thus trapping moisture under the steel. Also, the dunnage had not been laid out so as to leave channels for the ship's sweat to run aft to the bilge wells.

The charterers' response was to lay thick plastic sheeting across the steel plates and to provide detailed instructions on hold ventilation. But the solid block stow of timber cargo across the length and breadth of the holds almost certainly meant that the natural ventilation had little prospect of affecting any condensation which might be trapped on the tank top. On discharge, standing water was found on the tank tops, and the external edges of the bottom tier of plates were covered in bright orange rust. Interestingly, the attending surveyor reported that the plates

least affected were those underlying positions where the plastic sheeting had been torn or disturbed while the timber was being loaded.

In this case, the owners were fortunate in that, although the receivers did submit a high-value claim, it was eventually settled by charterers at a relatively low level. In other jurisdictions, and with other charterers, the owners could easily have faced a significant exposure. Any member involved in such trades should be alert to potential compatibility issues, and the importance of attention to allocation of contractual responsibility for such risks.

Vietnam rainy season

The Vietnamese government forecasts that around four million tonnes of bagged rice will be exported from Vietnam this year, with the vast majority being loaded in Ho Chi Minh City (HCMC). But owners fixed in this expanding trade must be aware of the particular problems posed by the local climate during loading. The rainy season in the HCMC region is expected to last from May to November, with rainfall expected to be highest in June, September and October. Moreover, the beginning of the rainy season this year has seen prolonged heavy rains across much of southern Vietnam, in contrast to the more typical sporadic showers.

Already there have been several cases in which ships loading multiple holds were caught out by sudden downpours. In each case a significant amount of cargo in the holds was badly wetted while the crew closed the hatch covers.

(Wallem Shipping Vietnam)





Vessels and narrow channels

The conduct of vessels in and around narrow channels is governed by Rule 9 of the Colregs, paragraph (d) of which provides that, "A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway."

In a recent incident, a yachtsman used VHF to contact a container ship, which was inward-bound in a narrow buoyed channel, to demand that "steam give way to sail" as he crossed the channel. The local Vessel Traffic Service's recording of the VHF exchange captured the master's five

short blasts in the background as the pilot attempted to correct the yachtsman's misunderstanding by radio. But the yachtsman - rather boldly, given the size difference - stood on, with the result that the containership was forced to execute a crash stop.

The two craft came within a few metres of each other, and contact was avoided primarily by the yacht turning away after the bridge team had lost sight of it under the bow.

Having received a complaint from the yachtsman, the local authorities investigated the incident. The yachtsman was adamant that Rule 18

made clear that the power-driven vessel should have kept out of the way of his yacht.

While interviewing the ship's bridge team, the investigators disclosed that the yachtsman seemed genuinely surprised when they referred him to the opening line of Rule 18, namely, "Except where Rules 9, 10 and 13 otherwise require ..."

The yachtsman admitted that he had not understood that Rule 9 provides an exception to the general responsibilities between vessels as set out in Rule 18.

The containership was, understandably, commended. The yachtsman may yet be prosecuted.

Smoke without fire



When a bulker arrived to load sintered ore, the master was understandably concerned about the temperature and condition of the cargo, which appeared to be giving off smoke (*see photo, left*). The local P&I surveyor quickly confirmed that the sintered ore was produced at an adjacent site and that the manufacturing process involves partially melting iron ore fines. The smoke is given off as the sintered ore cools on the quayside. As long as it is given sufficient time to cool, the carriage of sintered ore is generally unproblematic.

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