Tankers: How to avoid the blame game

Oil delivery shortfall? Cargo contaminated on arrival? It happens too often, according to Ian Hodges, Director of TMC Marine – and most of the time ships unfairly get the blame.

It's not difficult to load and discharge a ship correctly, as long as everyone is doing their job properly on board and ashore, says Ian Hodges. However, poor quality inspection, human error, and occasionally simple corruption are just some of the factors that can lead to outturn loss or contamination.

As an experienced consultant in the field, Hodges – a Master Mariner himself –knows only too well what happens in the real world. It's unfortunate, he says, that as soon as a problem is suspected, the finger is immediately pointed at the ship. Based on his experience studying hundreds of cases over the years, he would say the ship is to blame only 10% of the time.

"In reality, most losses, whether of clean petroleum products (CPP) or dirty petroleum products (DPP) are in fact 'paper losses' – in other words, the cargo was never on board in the first place," he says.

"Those at fault are normally the suppliers or the receivers or their delegates (the inspection company), and the loss is at times due to sloppy practice or corruption. Rarely has the ship caused the problem."

He estimates about 70% of the time the problem has been caused by the suppliers, or sellers at the load port, and perhaps 20% can be attributed to the receivers, or buyers, at the discharge port. The other 10% is down to the ship, primarily due to it being unable for whatever reason, to pump the whole cargo off, particularly with crudes which need heating or COWing (crude oil washing).

Cross contamination within the ship's tanks can happen at any time, but when it does occur it is usually during load or discharge, he says. "When this happens, 99% of the time this is due to human error, which can be as simple as opening the wrong valve."

Large losses on crude carriers are often due to a significant increase in water which was not detected at the load port. This is because after loading, water is not given enough time to settle out, especially when loading from an FPSO where the oil has just come from the seabed."

Three stages

There are three basic stages required to achieve any shipment of oil, says Hodges.

1) the cargo is loaded from shore tanks to the ship's tanks at the load port.

2) the cargo is transported from one port to another in the ship's tanks.

3) the cargo is discharged from the ship's tanks to the shore tanks.

"Contamination or physical loss of the cargo can happen during any of these three stages, although (2) is the least common," he says.

Owners have no control over what happens onshore, he points out. But there are steps that the Master can take to avoid difficulties at port. "He must ensure he presents his ship 'ready in every respect to load the nominated cargo', he says. "Follow ISGOTT (International Safety Guide for Oil Tankers & Terminals) and ISM (International Safety Management Code) and the Master can do no more."

The role of inspection companies

How do inspectors fit into this chain of events? Hodges says inspection companies are normally appointed jointly by buyers and sellers of the cargo, splitting the cost 50/50. "At the load port their primary role is to produce a certificate of quality, and a certificate of quantity which forms the basis of the bill of lading."

Masters should be aware that the inspector has absolutely no

contractual obligation to the owner or the ship. Sadly oil majors and trading houses don't pay inspection companies a lot. In recent years it seems that an inspection company would rather have long term steady business from an oil major with low profit margin, than unpredictable short term with higher margins. For this reason they often cut corners. For example, they are supposed to supply their own calibrated and certified equipment, but usually they are dependent on the ship's devices. Also, there are often delays when waiting for an inspector to arrive on board.

Advice and support

TMC Marine, a Bureau Veritas Group Company, has been providing advice and support to the marine industry since 1979. In his role, Hodges works to identify what went wrong, when and why. That should be achievable when armed with all the information and in particular the full inspection report at load and discharge, he says. "Sadly, you rarely get the full picture, especially when representing owners, as the inspection companies do not have to supply their reports to owners. Owners have to request the reports from charterers, and charterers can send what they like."

The sequence of events:

1: Suppliers sell a cargo to receivers. Quantity and quality (Q+Q) are agreed and deal terms defined.

2: The charterer gives voyage orders to the Master, defining (amongst other things) the name and quantity of cargo to be loaded, and the load port.

3: Based on density and volume, the Master plans stowage of the cargo, deciding which tanks to load. On CPP trade, the compatibility of the last cargo must be considered and decisions made on what tank cleaning is needed, if any. It is up to the Master to present his ship 'fit and ready in every respect to load'.

4: Prior to loading the inspector measures and samples shore tanks, normally within 24 hours of loading. Lab tests on this batch usually form the basis of the certificate of quality.

5: The ship's tanks are inspected to determine their suitability to load the cargo. An OBQ (on board quantity) survey is performed in order to determine the amount of liquid left from the last cargo. On CPP trade this is normally zero.

6: The cargo is transferred from shore tanks to ship's tanks.

7: The inspector surveys shore and ship's tanks to determine the volumes transferred and received, He then produces a certificate of quantity. Then he draws three sets of samples from the ship's tanks, one for buyers, one for sellers and one for the Master.

8: As long as there are no Q+Q issues, the ship proceeds to the discharge port.

9: Just before the ship arrives at the discharge port, the inspector measures shore tank quantities, and may take samples.

10: The ship arrives and the inspector takes samples from the ship's tanks, which are often tested before commencing the discharge. Ship's tanks are surveyed for quantity.

11: As long as Q+Q is the same as at the load port, discharge begins. Once the ship has been permitted to start the discharge, this is a good indicator there shouldn't be any further issues.

12: At the end of the discharge, the inspector measures the amount of cargo received onshore, which is the outturn figure. He also surveys cargo tanks to determine ROB (remain on board). The overall 'loss' is the difference between the bill of lading and the outturn. The acceptable industry loss is usually 0.3%.

13: If there are no Q+Q issues the ship can depart for its next cargo.

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