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Bulletin 659 - 10/09 - Excess Water Loaded with Crude Oil - Middle East

In June and July of this year three VLCCs, entered with the Club, have all experienced problems in Middle Eastern ports, where substantial quantities of water have been delivered with the crude oil loaded. Pertinent *Certificates of Quality*, issued after completion of loading, have drastically understated this water content thereby leading to substantial claims by Receivers for alleged Outturn shortages in Korean and Chinese discharge ports.

(I) On the 15th June 2009 the first vessel loaded Basrah Light Crude Oil at Basrah Oil Terminal in Iraq. On completion of loading some 11,911 bbls of free water was detected in all cargo tanks. As ship TCV loaded, adjusted for VEF, and total Gross Bill of Lading quantities were almost identical this free water must have been loaded with the cargo. The *Certificate of Quality* indicated a BS&W content of just 0.2 %vol yet the vessel had received nearly 0.6 %vol free water into the cargo tanks. Charterers were immediately advised of the problem but would give no definite instructions and so, in order to vacate the berth, the Master was pressured into signing the Bills of Lading. He did issue a protest to the terminal stating that this water may increase on the loaded passage.

In accordance with Charterers instructions cargo tanks were dipped daily on the loaded voyage but it would appear that all free water had settled to the bottom of the cargo tanks some four days after departure from Basrah. The vessel arrived at Daesan (Korea) on the 10th July and the arrival measurement survey indicated that free water had increased from 11,911 to 13,144 bbls. This compared to some 3,994 bbls (0.2 %vol of the Gross Bill of Lading) according to the issued *Certificate of Quality*.

The vessel subsequently discharged in Daesan and Zhoushan (China) and this disparity in the water content formed the major portion of claims for alleged Outturn shortages, based on alleged Net Bills of Lading and alleged Net Outturn quantities.

(II) On the 28th June the second VLCC loaded parcels of Arab Light and Arab Medium crude oil at Ras Juaymah in Saudi Arabia. The Arab Light parcel was loaded first followed by, after a short delay for sea line displacement, a parcel of Arab Medium crude oil. Just prior to completion of the Arab Medium parcel a further line displacement was undertaken in order to prepare for the third VLCC loading Arab Light crude oil. The vessel was single-hulled and discharged all segregated ballast directly to sea concurrently with the loading operations. There were no reports of any oil pollution during the loading operation. OBQ before loading was minimal with no free water found.

The 'after loading' measurement survey was undertaken by the vessel's crew, with the Loading Master in attendance, and whilst no free water was found in the Arab Light parcel some 2,849 bbls of free water was found in the Arab Medium nominated cargo tanks. Adjusted ship TCV loaded and shore Gross delivered quantities compared favorably and so, once again, it was more likely that the water was loaded with the cargo. The Master protested the free water loaded in the Arab Medium parcel, with the warning that there may be further settlement of free water on the loaded passage to Onsan in Korea. At the time of loading this free water was equivalent to some 0.3 %vol of the Arab Medium Gross Bill of Lading quantity yet the *Certificates of Quality* gave

water contents of only 0.05 %vol (492 bbls) and 0.075 %vol (697 bbls) for the Arab Light and Arab Medium parcels loaded.

The vessel sailed from Ras Juaymah on the 29th June and, after a period of moderate to rough weather conditions, the weather moderated sufficiently for the crew to take water dips from each cargo tank. This operation was undertaken on the 6th July and some 10,953 bbls of free water was detected in the Arab Medium nominated cargo tanks. This drastic increase in free water was almost certainly due to the fact that Arab Medium crude oil could retain free water in suspension for a longer period than the lighter crude oils. This is probably why it was not detected immediately after loading and, by the time the first water dips were taken, it had had plenty of time to settle to the bottom of each affected cargo tank.

The vessel berthed in Onsan on the 22nd July and the 'before discharge' measurement survey confirmed the substantial free water in transit increase (i.e. from 2,849 to 10,190 bbls). As TCV arrival quantities were consistent with those on sailing from the load port, this free water in the Arab Medium parcel must have been loaded with the cargo.

The increase in water content, between that purported in the Bill of Lading (697 bbls) and that found before discharge (10,190 bbls), of some 9,493 bbls would inevitably lead to a substantial claim for alleged Net Outturn shortage.

(III) The third VLCC loaded parcels of Arab Light and Arab Medium crude oil at Ras Juaymah, on the same SPM, immediately after the second VLCC. As with the second VLCC **t**he Arab Light parcel was loaded first followed by, after a short delay for sea line displacement, a parcel of Arab Medium crude oil.

The vessel was of double-hulled construction, which incorporated the segregated ballast tanks. There were no reports of any oil pollution during the loading and concurrent de-ballasting operations and so it was not possible for any of the discharged ballast to have entered any part of the vessel's cargo system. OBQ before loading was minimal with no free water found.

The 'after loading' measurement survey indicated that, whilst only 133 bbls of free water was found in the Arab Medium parcel, some 6,228 bbls of free water was found in the Arab Light nominated cargo tanks. It should be noted that the second VLCC Arab Medium parcel was loaded last and contained significant free water and this was followed by the Arab Light parcel loaded to the third VLCC, which also contained significant free water. As the ship TCV loaded quantities compared favorably this substantial free water must have been loaded with the cargo.
At the time of loading the free water in the Arab Light parcel (6,228 bbls) was equivalent to some 0.5 %vol of the Arab Light Gross Bill of Lading quantity. With reference to the Arab Light parcel the *Certificate of Quality* alleged a water content of only 0.05 %vol (638 bbls). The Master protested the free water loaded with the warning that there may be further settlement of free water on the loaded passage to Onsan (Korea).

The vessel arrived in Onsan about the 25th July and the 'before discharge' measurement survey confirmed that free water, in the Arab Light parcel, had increased on passage to 6,356 bbls. Once again, as TCV sailing and TCV arrival quantities were reasonably consistent, this free water must have been loaded with the cargo.

With reference to the Arab Light parcel the increase in water content between that purported in the B/Lading (638 bbls) and that found before discharge (6,356 bbls), of some 5,718 bbls (0.74 %vol of Gross Bill of Lading) would inevitably lead to a substantial claim for alleged Net Outturn shortage.

Recommendations

Regarding the above substantial free water loaded incidents, which would inevitably lead to substantial claims for Net Outturn shortages, the following precautions are recommended :-

- Upon arrival at the load port ensure that the OBQ survey measures for any free water and, if found, is accurately recorded by the attending independent inspectors or the Loading Master.
- If ballast is to be discharged at that port then ensure that representative samples of each type of ballast to be discharged are taken (i.e. if ballast is taken at more than one port

then samples should be taken to represent each quantity of ballast water to be discharged). If inspectors or Loading Master are on board at the time then get them to seal the samples, with an accurate description of the contents.

- As de-ballasting will normally be carried out concurrently with loading ensure that adequate records are kept of each operation, any segregation adopted and a statement that all de-ballasted tanks contain no oil after completion.
- If any free water is found in the cargo after loading advise Owners and Charterers immediately, with a request for further instructions concerning the signing of the Bill of Lading. The Master should ensure that Letters of Protest are issued to the terminal and that these are signed by a responsible terminal official. The Letter of Protest should, of course, also include the statement that the free water found after loading is likely to increase on the loaded passage due to further settlement.
- If at all possible, sealed samples should be drawn of the free water at the bottom of each tank. If not possible at the loading port then Charterers should be requested to arrange for free water to be measured and sampled, by an independent inspector, when the vessel passes Fujairah. The majority of any free water loaded should have settled to the bottom of each tank by the time the vessel reaches Fujairah.
- If samples have not been taken prior to arrival at the first discharge port then attending inspectors should be instructed to sample all free water found (where possible). Either T/M/B or running samples should also be drawn from each tank so that subsequent analysis can ascertain exactly what water was retained in suspension in the cargo.
- Particular care should be taken with all measurement and sampling operations during discharge operations. Far Eastern Receivers will not normally give Owners surveyors the invitation to monitor the shore sphere of operations and so it is most important that the vessel sphere of operations is accurately recorded.
- By far the biggest problem, of course, is the free water on board the vessel. The Net Bill of Lading is almost always significantly understated in these cases and, if free water quantities are large, it will always lead to a claim for alleged Net Outturn shortage. It is important to be able to establish that the free water is of shore origin. Free water samples can be analysed to establish whether it is production water (i.e. it must have originated ashore) or sea water (analysis can determine where the sea water is likely to have originated). If it is sea water then the vessel's ballast water samples can be analysed to give likely origins of each sea water sample analysed.

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