

THE STRENGTH OF TANK VESSELS

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Some time ago a very sensational loss of a ship took place as the tank vessel "MIELERO" broke in two in the Atlantic. In 1914 an equal loss of ship took place as the tank vessel "OKLAHOMA" also broke in two and sank a few days journey outside New York Harbour. Both these vessels seem to have been of the ordinary type for vessels intended to carry petroleum and both of a rather new type. MIELERO had highest class in Lloyd's Register and "OKLAHOMA" highest class in Bureau Veritas. As it is very strange that two vessels of the same type broke in two at sea, we have asked the director of the Norwegian Veritas to give his opinion of the cases.

The director informs, that he has no specified informations about the two losses that could explain the real cause of the catastrophies. In the case of "OKLAHOMA" it seems that the vessel has been in ballast and it is possible, that the distribution of the cargo might have been the reason for or at least a part of the reason for the misfortune. MIELERO is said to have been loaded with molasses, which is heavier than petroleum and perhaps a bad distribution of the weight may have caused the hull to break in the middle. As long as there is no positive information only guessings can be done. It is generally known that tank vessels specially larger ones, must be treated very carefully. The cargo must be carried loose and in short holds. These must be quite full and consequently other holds must be empty. It is always the holds forward and aft, which are empty and the cargo is distributed more or less concentrated above the middle part of the vessel. The consequence is, that the tendency, that all up to date vessels of plump shape has - to bend in the middle of the ship down in proportion to the ends specially when the vessel at sea, rests with her ends on two wave tops, - for tank vessels is strongly increased. If a tank vessel is in ballast there is often a tendency to fill the midship tanks with water, in which case the tendency to bend arises as above mentioned. In the case of OKLAHOMA it is reported, that the deck plates shrunk amidships before the vessel broke, which shows that the

harm originally subsisted from the bending. Although the catastrophies with MIELERO and OKLAHOMA are very rare, the shrinking of the decks/^{has} happened now and again, which again shows that tank vessels have the above mentioned larger tendency to bend than ordinary cargo vessels and therefore must be treated more carefully, if they are not given a corresponding increased strength in the deck. The Norwegian Veritas has therefore, in spite of the fact, that their Rules as regards the strength of the deck for larger vessels are considerably above the rules of Lloyd's Register, expressly recommended in their rules that in cases of tank vessels the deck's strength must be greatly increased, namely corresponding to 10 % increase of the scantlings' number determining the material dimensions. The director mentioned also that it would be of interest to all shipbuilders and specially to owners of all tank vessels, that an authentic and detailed statement p. ex. from the United States Steamship Inspection Board respecting the accidents with the MIELERO AND OKLAHOMA so that precautions could be taken of all interested to escape such catastrophies in the future. As regards Oklahoma a statement appeared some time ago respecting the shipwreck, but a full report on the last catastrophe does not seem to have been published.

It must be mentioned in connection with the above, that the s/s "CUDABIST" a sistership to MIELERO and build in 1916 has recently been reported lost on a voyage across the Atlantic with a cargo of molasses.

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Have they
any others
at all.