

Explosion from an American water-tube boiler on board the
"TRESUS" O.N. 181766 in Birkenhead Dock, on the 22nd October,

7.
(1) Cause of the explosion according to the report made to the
Ministry of Transport by their Surveyor.

The mishap was caused by shortness of water, thus allowing metal of the tube wall to become overheated so that the tube could not withstand the internal pressure to which it was subjected.

(2) Observations of the Engineer Surveyor-in-Chief.

The report relates to an explosion from a lower generating tube one of the two oil-fired boilers arranged side by side in the hold of this classed vessel built in America in 1944. The tube ruptured over a length of about 4 inches and tubes in the vicinity were distorted. Fortunately no person was injured.

At the time of the explosion, the vessel was in dock and the boiler was in operation, with three of the four burners in use, supplying steam for auxiliary purposes. The boiler safety valves were adjusted to relieve at the designed working pressure, 500 lb. per square inch. The boiler mountings included an ordinary plate glass water gauge, a distant reading water level indicator and a feed water regulator.

Examination after the explosion showed that the interior of the boiler was in clean condition, except for a slight amount of powder deposit in the lower tubes, indicating that care had not been exercised in regard to the quality of the boiler feed water, that the distant reading water level indicator and the feed water regulator were not in working order and the fittings of the glass water gauge were so adjusted that the opening to the steam space was unduly restricted. It seems clear that the explosion resulted from shortage of water and that insufficient attention had been given to maintain the water gauges and the feed water regulator in proper working order.



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