

(No. 7035.)

"OCTOPUS" (S.S.).

REPORT and Finding of a Court of Inquiry held at Durban on the 23rd, 24th, 25th, 29th, and 31st days of October and 2nd day of November, 1906, to investigate the circumstances attending the abandonment of the British s.s. "Octopus" on the 14th October, 1906.

Report.

The "Octopus" was built in 1895, and arrived in this Colony either at the end of 1895 or the beginning of 1896, and had been practically constantly at work ever since, engaged in dredging operations at this port. The Court sat on the following days, or portions thereof, October 23rd, 24th, 25th, 29th, and 31st, 1906, and the following witnesses were examined:—

Thomas Ogilvy, master of the "Octopus."
John Rainnie, port captain.
Gilbert Howie, first mate of the "Octopus."
Frederick Airth, Lloyd's surveyor.
Thomas George Dummer, boatbuilder.
James Brand Martin, foreman of machinery, Natal Harbour Department.
James Shand, shipwright.
John Ogilvie Stewart, chief engineer of the "Octopus."
John Wishart, second engineer.
William Christie, third engineer.
Humphry Hicks Barnicoat, boatswain.
James Cumming Young, late master of the "Walrus."
Francis Hatchell, donkeyman on the "Octopus."
George Samuel Richardson, engineer, Geelong Harbour Trust.
Alexander Pirie Booth, inspector of machinery, Natal Harbour Department.
Charles Hutchins, and
John Shorthouse, employees of Nicoll & Co., coal contractors.

By agreement entered into at Durban on the 13th August, 1906, the Colonial Government of Natal sold to the Geelong Harbour Trust Commissioners the two steam hopper dredgers known as the "Walrus" and "Octopus," then lying in the harbour of Port Natal, together with their equipment.

Article 4 of the agreement provided:—"The Government undertake, before the delivery of the dredgers, to place them in such condition as will enable a marine surveyor at Port Natal to give his certificate of seaworthiness."

Article 6 provided that:—"The Government shall grant to the Commissioners the use of the floating dock, free of charge, for a sufficient length of time to enable them to put in each dredger a water-tight false bottom or deck, the said Commissioners undertaking to use all reasonable despatch in such work."

The "Octopus" was duly placed on the floating dock. From the evidence produced before the Court, particularly by Mr. Richardson, the engineer and agent for the Geelong Harbour Commissioners (who came to Natal for the purpose of taking over and superintending the despatch of the two dredgers), it would appear to be clearly established that the Colonial Government complied with every requirement of the Harbour Commissioners and their surveyor at this port, Captain Frederick Airth (marine surveyor for Lloyd's), so far as the "Octopus" was concerned.

The Commissioners caused what was intended to be a water-tight false bottom or deck to be put in the "Octopus," at a height of about 6 ft. above the hopper doors. This work is described in Captain Airth's survey report of October 13th as follows:—

"In fitting out the vessel for sea, the hopper doors were firmly secured by bolts and screws to pitch pine beams 8 in. sq., and a temporary deck of 3 in. deal was laid on 6 in. pitch pine beams, about 6 ft. above the hopper door. This deck was well laid and caulked and shored down, the upper portion of hopper to serve as a reserve bunker for coal."

In addition to this, the following work was carried out, namely:—

"The opening between deck and fore and aft well bridge, some 3 ft., extending the whole length of the well, was covered with 2 in. deal planks, with moveable sections at intervals for getting at the coal on both sides of the well."

On October 13th (the day of sailing), Captain Airth gave a certificate, which concluded in the following terms:—

"I have transmitted to the Committee of Lloyd's Register of British and Foreign Shipping a report to follow this, stating that all repairs recommended by me have been completed to my satisfaction, and that, in my opinion, the "Octopus" is now in sound state of repair and in good working order, and is in every way fit to proceed on her proposed voyage from Port Natal to Geelong in Australia."

Thomas Ogilvy was appointed master, John Ogilvie Stewart, chief engineer. The former had been master of the dredger at this port, on and off, for three years, and the latter had been connected with the same vessel for about two and a half years. Both men knew the vessel and her capabilities thoroughly. The master was instructed by the agent for the Geelong Harbour Trust to superintend the taking on board of sufficient coal and stores for the voyage to Geelong in Australia. Seven hundred and eighty-five tons of coal, or thereabouts, were bought and placed on board, making, with 16 tons, or thereabouts, already in the bunkers, approximately 800 tons of coal all told.

The distribution of this coal was, as nearly as possible, as follows:—

Below deck (a) 460 tons in the hopper, resting on the false bottom or deck above mentioned; (b) 110 tons in the cross bunker; (c) 50 tons in the after peak; (d) 25 tons in the pump room. On deck 155 tons were placed on the after deck, ram deck, and fore deck. All the coal stowed on deck was in bags, except that on the ram deck, which was in a specially-constructed bin. The whole of this coal was stowed to the satisfaction of the master and chief engineer.

When the "Octopus" left England for Natal on her original outward voyage, she was stated in Lloyd's Register to have had a freeboard amidship of 2 ft 4½ ins. When she left Natal for Geelong, so far as can be ascertained after the most careful enquiry, her freeboard amidship was from 1 ft. 10 ins. to 2 ft. The "Octopus" was designed to carry 1,200 tons of sand, 110 tons bunker coal, and, when fully loaded used often to put out to sea to discharge her spoil with her decks practically awash. So far as it was possible to ascertain from the evidence available at this Port, the work done on the "Octopus" to equip her as a sea-going vessel was of similar character, generally, to that done to the "Octopus," and the other dredgers "Walrus" and "Grampus," when they were safely brought out from England to this port. The master and engineers were satisfied that everything necessary had been done.

On one point the evidence was very clear, however, and that was, that during the period of the vessel's overhaul, about 16 tons of coal remained in the cross bunker, obscuring for a height of some 3 ft. or so a portion of the after bulk head, which forms at the

same time one exposed surface or side of the hopper, and one exposed surface or side of the cross bunker. This coal was not removed for the purpose of inspecting the portion of the bulk head covered by it, and the evidence shews that that bunker had never been completely cleared of coal since January 1904.

The vessel carried two boats, one of which was fitted as a life boat and the other a small dinghy. Both boats were overhauled by the Harbour Department before the vessel sailed. The "Octopus" sailed about noon on the 13th October, 1906, with 25 souls on board, all told, including two women and two children. The weather at the time was moderate but increased to a moderate gale with a high sea later on. About 7 p.m. the same evening water was found by the engineers to be coming through the bunker doors into the stokehold. The pumps were at once set to work, and were kept going continuously, without any material effect until the water rose to a depth of about 18 inches above the stokehold plates, washing out the lower fires. All available hands were employed in endeavouring to keep steam, while an attempt was made to ascertain the cause, or source, of the influx of water. Coal dust seems to have found its way to the rose boxes, pipes and valves becoming choked in the stokehold connections. These were cleared, but became frequently choked, until the only source of pumping was from the after bilges by the starboard donkey pump. The evidence goes to shew that the vessel had appreciably increased her draft, the extra submersion being then about 8 inches. The water in the stokehold does not seem to have materially increased beyond the depth mentioned. During the night the master decided to turn the vessel's head towards Durban, but was not able to make any great headway. At midnight the master jettisoned about 20 tons of coal from the after deck. During the early morning of the 14th October, a seaman named James Sterling was sent by the cook to fetch some water from the fresh water tank on the fore deck. He set out to carry out his orders, but was never seen again. A search was duly made for him everywhere on the vessel, but without success. At the time heavy seas were breaking over the vessel and it can only be assumed that he was washed overboard.

During the early morning of the 14th October the weather began to moderate, and continued to do so. At about 11 a.m. the vessel, according to the computation of the master, was about 15 miles from the nearest point of the coast. At this time the deck openings were still closed and intact. Water continued to come in from the cross bunker, but the port engine and the starboard donkey pump were still working. The master, after consultation with the chief engineer, decided to abandon the vessel.

The evidence of all the witnesses called, who were on the vessel at the time, was to the effect that they considered that the vessel was sinking, and would not float more than two hours at the outside. The vessel had, however, at the time, as far as can be ascertained, a freeboard of from 10 to 12 inches from the deck line. The life boat and dinghy were lowered without any mishap or damage. Sail was set at once and both boats were headed for the shore, the dinghy being in tow of the life boat. They parted company on nearing the shore, having decided to run for the beach. The crew of the dinghy landed in safety, although their boat was upset, but the life boat struck a rock some distance from the beach, and the boat capsized, with the lamentable result that the captain's wife and two young children were drowned. The vessel, after having been abandoned, drifted towards the coast and was driven ashore during the night of the 14th October, at a point about 2 miles north of the Tongaat river, where she now lies, so far as can be seen, a total wreck.

It is beyond question that the vessel floated after abandonment for at least 6 or 7 hours, and there is no knowing how much longer she might not have continued to float had she not been driven aground.

There is no evidence to shew that the vessel's reserve buoyancy (exclusive of the engine room space and bunker) had been affected or impaired.

The Court had the advantage of being able to inspect, in the harbour, the steam hopper dredger "Grampus," which, in nearly all essentials, is a counterpart on a larger scale of the "Octopus," and which was then undergoing overhaul. The chief engineer, and other witnesses, were requested to point out, and did point out, on the "Grampus," the exact corresponding positions whence water had come into the stokehold and engine room of the "Octopus."

The Court also had the advantage of being able to take the evidence of Captain Young, who brought out the dredger "Walrus" from England. The "Walrus," on her outward voyage, had a false bottom, and carried, approximately, 400 tons of coal in the hopper. In that case the false bottom was fitted to the vessel by Messrs. Wm. Simons & Co., Ltd., the builders of the dredger. Captain Young gave a most valuable piece of evidence, namely, that on the outward voyage of the "Walrus" the false bottom burst upwards, with the result that this was followed by an almost immediate submersion of the vessel to a depth of about 8 ins. more than before the accident.

Now, in the opinion of the Court, this is exactly what took place on the "Octopus." The doors in the bottom of the hopper, ordinarily used for discharging the load of sand, though closed, were not watertight, and were never intended to be. The water would, therefore, naturally rise in the hopper up to the level of the false bottom; that is to say up to a level of about 6 ft. above the hopper doors. This false bottom was designed to be made watertight to prevent the water rising in the hopper to the level of the water outside, and also to carry the cargo of coal. The total quantity of water contained in the hopper of the "Octopus," under the false bottom, when the vessel sailed, would be, as nearly as possible, 220 tons. If, however, the false bottom gave way, the water in the hopper, up till then held in check by the false bottom, would at once rise through the coal above it to the level of the water outside. In such a case the effect of the loosened flooring, with a cargo of coal above it, moving with every motion of the vessel, would be to enormously increase the lateral strain of the after and forward bulkheads, and, if the after bulkhead from such excessive strain, or from the impact of any part of the moving floor, or of the loosened struts or heavy supports, had given way at any weak spot, water would at once make its way (as it actually did) into the cross bunker and from thence to the stokehold and engine room. That the water came from the hopper was clearly shown by the fact that the upper coals in the bunker were found to be perfectly dry. The Court gave the very greatest attention to the evidence led with regard to the stowing of the coal on deck, and every witness capable of giving evidence on this point was examined most carefully.

Finding.

(1) That the disaster to the "Octopus" was not caused by the coal stowed on deck.

(2) That, at about 7 p.m. on the 13th October, 1906, water began to come into the stokehold and engine room, through the cross bunker doors, until, in spite of pumping, the water rose to a level of about 18 ins. above the stokehold plates—equal in volume to about 120 tons of water in the engine room and stokehold. That such water did not come from above, but from the hopper, through apertures or fractures in the after bulkhead; but how such apertures or fractures were caused, there is no direct evidence to shew. That the effect of such water coming in, with other water, which undoubtedly rose through the false bottom, was to cause submersion of the vessel until she had a freeboard from the deck line of only about 10 to 12 ins.

(3) That at 11 a.m. on the 14th October, 1906, the vessel was found by the Harbour Department to be incapable of her.

(4) That the judgment of the Court, especially in regard to the wind towards the coast, was correct, and there was no anchors.

(5) That the condition of the vessel was such that it was not possible to save her.

(6) That the Court was of opinion that the vessel was not seaworthy.

(7) That the Court was of opinion that the vessel was not seaworthy.

(3) That at the time of abandonment, namely 11 a.m. on 14th October, 1906, the reserve buoyancy of the vessel was not appreciably affected, and that she was (having special regard to her construction) capable of floating, notwithstanding the water then in her.

(4) That the master was guilty of grave error of judgment in abandoning the vessel when he did, especially in view of the fact that the then prevailing wind was such as to cause the vessel to drift towards the coast, and either into the track of coasting vessels or to a portion of the coast where there was sufficiently shallow water to have let go the anchors.

(5). The life boat and dinghy were in serviceable condition.

(6) The master committed an error of judgment in trying to beach the boats where he did.

(7) The false bottom was not, in the opinion of the Court, of sufficient strength for the voyage.

The Court and assessors desire to express their thanks for the very great assistance which has been given in this inquiry by the port captain and officials of the Port and Harbour Department.

2nd November, 1906.

(Signed) PERCY BINNS,
President of the Court.

CHARLES REEVES, } Assessors.
W. H. DICKIE, }

I certify the above to be a true copy of the original.

PERCY BINNS,
President of the Court.

(Issued in London by the Board of Trade on the
12th day of February, 1907.)