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OFFICIAL COPY.

(No. 15.)

"LEVANT" (S.S.)

The Merchant Shipping Acts, 1854 to 1876.

In the matter of an Investigation held at North Shields, on the 7th day of June 1888, before LEIGHTON MILLS, Esquire, Inspector appointed by the Board of Trade, to inquire into and report upon the circumstances attending the supposed loss of the British steamship "LEVANT," of South Shields.

Report.

Board of Trade Office,
North Shields,

21st June 1888.

SIR,

In pursuance of the instructions conveyed to me in your letter of "Appointment as Inspector" of the 28th ultimo, I have inquired into the circumstances attending the supposed loss of the "Levant" s.s., of South Shields, and beg to report as follows:—

The "Levant" was a British steamship, built of iron at Hartlepool in the year 1865. Her length was 209 ft., her breadth 28·7 ft., and her depth 16·3 ft.

She was rigged as a schooner, and was fitted with two engines of 90 h.p. combined. She was registered at the port of South Shields, her official number being 51,378, and her tonnage, after deducting 268·77 for propelling power and crew space, was 472·38 tons.

From the time of her building until December last she was owned by Messrs. Taylor, Cameron, & Co., of Liverpool. She then was sold to Mr. Walter Runciman, of Dean Street, South Shields, and others, Mr. Runciman being the managing owner. No mortgages appear to have been registered in connection with the ship.

The vessel was built by Messrs. Denton, Gray, & Co., of Hartlepool. That firm has ceased to exist for some years, and their successors, Messrs. W. Gray & Co., are unable to supply any plans or give any information as to her construction.

The previous managing owner is dead, but Mr. John B. Hepburn, superintendent engineer to the former owners, stated that they had no plans or specification of the vessel. He said she was flush-decked, with a raised quarter deck about 3 ft. high and 45 ft. long. She had also a monkey fore-castle. She had four iron bulkheads, two tiers of beams, but no deck laid on lower beams. The main deck was of wood, and a casing midships of iron was built over engines and boilers. This casing was about 9 ft. high, and there were two alleyways through it, with houses on each side for officers' accommodation, &c. The donkey boiler stood in a casing on deck forward of the galley, and there were iron doors leading into the engine-room casing. The hatchway coamings were about 18 in. high, with a central bearer of iron athwartships, and fore and aft wood bearers with carling hatches.

Mr. Hepburn also said she had three iron ventilators, two to fore hold and one to after hold, about 8 in. in diameter and 3 ft. high; they had mushroom tops. The engine-room skylight was on the top of the engine-room casing; it was constructed of wood with lifting sashes, and there was a tarpaulin cover for it. There

was a companion forward into the fore-castle; it was made of teak, with folding doors on the after side, and there was a similar companion on the poop leading to the cabin, made of wood, with folding doors and sliding top; both were secured with bars and locks. The stokehole hatchway had gratings on the bridge-deck, with hatches to cover it in heavy weather, and there were doors at the side of the stokehole openings leading into the alleyways. The disc was placed at 1 ft. 10 in. below the original main deck; this deck had subsequently been sheathed with 1½ in. pine, the disc remaining where it was. Mr. Hepburn could not say what calculations were made for placing the disc.

Mr. Hepburn also stated that the vessel usually carried about 970 tons of cargo, but she has carried as much as 1,000 tons in summer time. She was an excellent sea boat, and was always reported so by her master and officers. She was sold as the owners found her no longer suitable for their business, and when she was sold the engines, boiler, and hull were in good condition.

Mr. Walter Runciman, managing owner, stated that he bought the "Levant" in December last. She was a single decked ship built of iron, at Hartlepool, in the year 1865. She was constructed of very thick and narrow plates, but he had no plans, and could say nothing further as to her construction. The hatchways were of the ordinary size, covered partly by solid hatches and partly by carling hatches. The ventilators were one foot in diameter, constructed of iron and fastened to the deck in the usual way. The engine-room skylight had high iron coamings, and could be covered with wooden tops, and the stoke-hole openings had iron lids. The fore-castle companion was constructed of iron, and the cabin companion, which was on the raised quarter deck, of wood. The entrance to the officers' berths and stokehole was under the bridge.

Mr. Runciman also stated she had passed through her Lloyd's survey at the end of the previous year. She was put into dock after being purchased, and all necessary repairs, including supplying a new donkey boiler, were effected by Messrs. Clover, Clayton, & Co., Messrs. John Duncan & Co., and Messrs. Clarke, Chapman, & Co., at a cost of 146l.

The load-line disc was placed at 1 ft. 10 in. or 1 ft. 11 in. from the deck, and it was not altered, and Mr. Runciman stated that he always cautioned the master not to load the vessel too deep. No calculations were made as to the stability of the ship, but Mr. Runciman stated that from the reports of her captains, she was a good sea boat, and behaved well in rough weather.

In February last the vessel's boiler was surveyed by Lloyd's in the Tyne, and repaired to their satisfaction, and other repairs were done at a cost of 56l.

When she left Penarth on the 24th March last she was in good condition, well found in hull and machinery, and her deck and engine pumps were in good order. She carried two boats, one of which was a lifeboat. She was also well supplied with stores, gear, and apparel.

Mr. Runciman stated that he valued the ship at 4,000l., but declined to say for what sum she was insured. The value of the freight was 360l., and it was not fully covered by insurance.

Mr. John Duncan, shipbuilder at Liverpool, stated that the vessel was put into Salthouse Wet Dock at Liverpool in December last, and repaired by him. A new donkey boiler was fitted on deck, all the steam pipes between the boiler and the winches and the

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engine-room telegraph were repaired, and the bilges cleaned. She passed her survey in November 1886, under the inspection of Lloyd's surveyor, and he considered her a good seaworthy ship.

With regard to the repairs to boilers in the Tyne, it appears that Mr. Ettringham fitted five patches in the combustion chambers, renewed one stay, and the boiler was then tested to the satisfaction of Lloyd's surveyor.

Mr. Williams, Board of Trade Surveyor at North Shields, stated that he saw the vessel in the Tyne in February last, when she was said to be laden with a cargo of 927 tons of coal and 69 tons for bunkers—total 996 tons, but he was not on board of her. With this cargo she was drawing 15 ft. 6 in. forward, 15 ft. 9 in. aft—mean 15 ft. 7½ in., from which he estimated she would have a freeboard of 2 ft. 3 in., but he added to this 2 in. for rise in salt water, and 1½ in. for sheathing of upper deck, thus making the freeboard 2 ft. 6½ in. in salt water. The freeboard required for this vessel by the Load Line Committee's Tables is 2 ft. 8½ in. in winter and 2 ft. 6½ in. in summer.

In the month of March last the vessel was at Penarth, and she there took in a cargo of coal.

Mr. George Wm. Breffit, Agent to the Maritime Coal Co., Limited, deposed that the coal put on board the vessel is a semi-bituminous coal, and was from the upper four-foot seam of the Maritime Colliery at Pontypridd, Rhondda Valley. The coal was worked on the 15th, 16th, 21st, and 22nd, and was shipped on the 23rd and 24th March.

Tons.	Cwt.	
151	2	was placed in No. 1 hold.
426	15	" " " 2 "
251	19	" " " 3 "
95	14	" " " 4 "

925 10, and in addition 73 tons 17 cwt. of coal was shipped for bunkers. Total 999 tons 7 cwt.

Mr. J. T. Robson, Government Inspector of Mines at Swansea, deposed that the coal worked from the upper four-foot seam of the Maritime Colliery, Pontypridd, is a steam coal, and the method of working is by the long wall system, by which all the coal is sent out freshly cut from the solid. It is worked with safety lamps, gives off gas freely, and would continue to do so for a considerable time after being sent out. The coal is remarkably free from pyrites, but it does exist in the form of lumps called brasses, which are picked out by the miners and during the screening. The coal is very free from sulphur, and Mr. Robson is of opinion that it is not liable to spontaneous combustion.

Daniel Ryan, trimmer, deposed that the vessel was loaded at Penarth on the 23rd and 24th March last, and she carried 925 tons 10 cwt of coal. Holds No. 2 and 3 on either side the engine-room were quite full to the decks. Hold No. 4 was almost full, there being room for about 4 tons at the end, and in No. 1 hold there was a space forward for about 60 tons. He could not give the draught or freeboard of the vessel.

James Brake, trimmer to the Maritime Coal Co., stated that the "Levant" commenced loading in Penarth Dock at 9 a.m. of the 23rd, and finished at 2.30 p.m. of the 24th March. The total amount taken in for cargo was 925 tons 10 cwt., which was dry and in good condition.

The vessel had one deck and two bulkheads dividing the engines from the holds. Forward of the engines were holds 1 and 2, which communicated; and aft of the engines were holds 3 and 4, which also communicated. Nos. 2 and 3 holds were quite full to the deck, and No. 4 hold was almost full; but there was a small space left at the end of the vessel for 4 tons more. No. 1 hold was not completely filled, there being a space left forward for about 60 tons. The coal was trimmed to the middle of the vessel and could not shift.

Brake also stated that he never saw any ventilators either in the hold nor on deck, and his impression is that there were none, the only ventilation being by means of the hatchway. When the loading was completed the top part of the ring of the disc just showed above water.

Thomas Hall, Bristol Channel pilot, stated that he boarded the vessel in Penarth Docks about 3.30 p.m. of the 24th March last, and the weather was then fair with a smooth sea. The vessel appeared to be in good condition, and her draught in dock was 16 ft., and she would rise about one inch in salt water. He produced a pilotage certificate signed by the master, giving the draught at 16 ft. The vessel sailed about 4.30 p.m., and upon arriving 1½ miles N.N.E. of Breaksea he left her.

The vessel left Penarth on the 24th March last, with a crew of 15 hands and the above-mentioned cargo, bound for Oporto, and since the time the pilot left her she has not been heard of.

In addition to the above statements the owner called Mr. George Washington Allen, of South Shields, who surveyed the "Levant" before her purchase by Mr. Runciman in December 1887, and who said he found her hull in very good condition. Her anchors consisted of two bowers—bent—a spare bower, and kedges, but could not say how much cable she had. That her boats were not new but good. That she was steered by an ordering steering gear aft, and that he was so satisfied with her generally that he recommended Mr. Runciman to close the bargain for the ship. He also saw that the bilges were properly cleaned out. He afterwards saw her when loaded in the Tyne in February last, and her disc was then clear of the water 2 ins. He was, however, 200 yards off when he made the observation.

Mr. Thos. Tully, manager Middle Dock Co., South Shields, also stated he made some repairs to the "Levant" in February last, and that she then appeared to be in good order, and that the disc, which he observed from alongside, was out of the water.

Mr. Thos. Lawson, tug owner, also observed that on the occasion of the "Levant" being loaded in the Tyne the disc was clear of the water.

The owner does not appear to have employed any one to especially see to the condition of her machinery, pumping arrangements, etc.; and the only information deposed to in this inquiry with regard to the machinery was by Mr. Hepburn, who said the engines and boilers were in all respects in good condition, but that they had been in the ship since she was new, that is about fourteen years.

From the consideration of the evidence in this case, the main points of which are detailed above, I conclude—

Firstly, with regard to her condition when she left Cardiff on the 24th of March last, she was, so far as her hull, machinery, and equipment is concerned, and considering her as an old vessel, in fair condition, and I have heard nothing that would lead me to say she was, in respect of these matters, unseaworthy.

Secondly, whether her load-line disc was placed so as to give her sufficient freeboard if loaded to it in salt water, I unhesitatingly say it was placed too high, as apart from any opinion of my own the freeboard required by the Load Line Committee's Tables for this vessel is practically 2 ft. 8½ in. in winter, whereas her disc was actually placed at a distance of, at most, 1 ft. 11½ in. from top of the wood sheathing with which the deck had been covered.

Thirdly, as to the security of the hatchways and the openings in the upper deck, these appear to have been secured by the ordinary means.

Fourthly, as regards the ventilation of her coal cargo, there appears to have been two ventilators in the forehold, but they, although large enough—one foot diameter each—were, as described by Mr. Hepburn, both at the fore end. It is generally assumed that the proper position is one forward and one aft, and they would have been more effective in those positions. As there was a wood bulkhead only separating the crew space forward from the hold, it was the more necessary that the ventilators should have been sufficient to guard against ignition of coal gas arising from a cargo such as she had, that is, coal very liable to give off gas, but the after-hold was fitted with but one ventilator. I cannot say, therefore, that in my opinion this vessel was properly ventilated for a coal cargo.

Fifthly, as regards the amount of her loading, it was stated, as given above by several witnesses, that with nine hundred and twenty-seven tons of coal and sixty-nine tons of bunkers, in all 996 tons, she had in the Tyne in February a mean draught of 15 ft. 7½ in., whereas at Penarth, in March, when she left on her last voyage, she was said to have had nine hundred and ninety-nine tons seven hundredweight of cargo and bunkers, only three tons seven hundredweight more, and yet the only persons who spoke to the freeboard and draught at this time, viz.: the coal trimmer, Brake, and the pilot, Hall, would lead one to suppose that she was drawing at least 16 ft. Hall produced a pilotage voucher, signed by the master, W. Youngberg, in which the draught is stated to be 16 ft., but as he was not, as at some ports, paid for his pilotage services on the draught, he could not verify this, and did not take any notice either of her draught or clear side, and it is quite possible that the 16 ft. meant the draught aft

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Mr. Will her depth the density two inches to the sea and as it is the time, a should be a

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only, and was no indication therefore of her mean immersion. Brake, although apparently a truthful witness, and positive in saying that the centre of the disc was immersed, and that the top of the ring of the disc was only visible above water two or, at most, three inches, may have been mistaken, as he also, quite as distinctly, said that he was not in the habit of observing freeboards. If the disc only shewed so much as he said, she would only have one foot six or eight inches from her deck-line, or one and three-quarters of an inch more to top of wood sheathing of deck, but the difference of freeboard on the two occasions, viz., that observed in the Tyne in February, and that in Cardiff in March, taken into consideration with the density of the water in each port, cannot be accounted for by the difference in the amounts of loading of cargo and bunkers included.

Mr. Williams, Board of Trade Surveyor, estimated her depth at side as 17 ft. 10½ in. His allowance for the density of the water in the Tyne, which he put at two inches, is, considering the proximity of the vessel to the sea and the time of the tide, I think, too much, and as it is known that her boiler was under repair at the time, and would then be empty, another inch or two should be added to her immersion when it was filled.

The depth at side is, I think, more clearly to be ascertained from the log book of a former master, under date 16th September 1887, when on four separate occasions the freeboard and draught are in agreement, and in each amount to 17 ft. 10 in. This is half inch less than Mr. Williams estimates, and reduces her freeboard to 2 ft. 2½ in., and putting the amount she would rise as counterbalanced by the filling of the boiler, and as I do not think she should be credited with the 1½ in. for

deck sheathing, as it was not put there excepting to cover defects in the original deck, I am of opinion this was her freeboard in salt water on leaving the Tyne, and she was consequently 5½ in. too deep.

From the amounts of cargo given by the shippers on each of these two voyages, it appears she had only three tons seven hundredweight more on leaving Cardiff in March than on leaving the Tyne in February, so that she would not, so far as the amounts put on board is concerned, be any lighter.

No evidence was produced as to the capacity of the bunkers, nor how much they might contain on either occasion, but it is only reasonable to suppose they were on both occasions filled up.

I think, therefore, although the evidence is conflicting, the probabilities are in favour of the view that she was overladen on leaving Cardiff on the 24th March last, but I am unable to say to what extent.

Sixthly, the owner, Mr. Runciman declined to state the cost of the vessel, or for what she was insured.

He stated, however, that the insurance did not cover his valuation of her, which he put at 4,000l. He also stated her freight was 360l., which was not half covered by insurance.

Lastly, I am unable to say, from the evidence produced, what was the cause of the vessel not having been heard of after leaving Cardiff on the 24th March 1888.

I am, Sir,
Your most obedient servant,
L. MILLS,
Inspector.

The Assistant Secretary,
Marine Department,
Board of Trade.