

(No. 3771.)

"VAITURNA" (S.S.)

Bombay,
Chief Presidency Magistrate's Court,
13th December 1888.

Pursuant to Government Notification, Marine Department, No. 88, of the 22nd November 1888, appointing C. P. Cooper, Esquire, Chief Presidency Magistrate, Captain M. Bean, I.M., Assistant Port Officer, and Captain J. De Horne, commanding the P. and O. Company's s.s. "Surat," to conduct an investigation into the circumstances under which Messrs. Shepherd and Company's s.s. "Vaiturna" proceeded to sea and was last heard of, the Court assembled on the 7th and 10th days of December for the purpose stated.

2. From the evidence before the Court, it appears that the s.s. "Vaiturna," official No. 90062, was a screw steamship, built of steel at Grangemouth, Stirling, in the year 1885, by the Grangemouth Dockyard Company, at the cost of about 10,000*l.*, of the registered tonnage of 63.50 tons, and gross tonnage 292.26 tons, rigged as a two-masted schooner.

3. She had an awning deck, a main deck, and a shifting deck below her holds, clincher built, elliptical stern, straight stem. Length 170.1 ft.; beam 26.5 ft.; depth of hold 9.92 ft.; length of engine-room 48.5 ft.; was fitted with two compound surface-condensing engines working a single screw propeller, made by Messrs. Dunsmuir and Jackson, Govan Engine Works, Glasgow; the diameter of cylinders 21 and 42 ins.; stroke 30 ins.; horse-power 73.

4. She had seven watertight bulkheads $\frac{3}{4}$ ths of an inch thick, one of which was a collision bulkhead. All were fitted with cocks or sluices. She had five scuppers and one water port on each side, and side scuttles fitted with deadlights, and iron or steel bulwarks 3 ft. 6 ins. high, and a rail round her awning deck. Hand-pumps were fitted to each hold and one to the engine-room, and each compartment could be pumped out by the main or donkey engines. She had a cargo capacity of 25 tons. Her average load draught was forward 8 ft., and aft 9 ft. 6 ins. Her freeboard was 2 ft. 5 ins.; her average speed 12 knots. She steered by steam on the bridge, and had independent hand gear aft. She was duly registered at Glasgow on the 20th of July 1885, and is reported to have afterwards obtained from the Board of Trade a home trade passenger steamship certificate to carry 600 passengers, and was surveyed and found to comply with the conditions necessary for her admission to the Admiralty list of merchant ships suited for State purposes, and was on the 31st August 1885 duly entered on that list.

5. She left Grangemouth on her voyage towards Bombay in July 1885. Mr. Campbell McIntyre, who holds first-class certificate as engineer from the Board of Trade, was on board as chief engineer. She called at Plymouth, and left there with 165 to 170 tons of coal on board, touched at Malta, called at Constantinople, and there discharged all the coal out of her holds. She was re-measured there by the Turkish authorities, and was licensed to carry about 763 passengers. She left Constantinople with 700 pilgrims on board for Jeddah, with coal in her bunkers, touched at Smyrna, and passed through the Suez Canal to Jeddah, where she landed her pilgrims, and proceeded on her voyage. She called at Aden, and left there with 80 tons of coal. Her draught was 8 ft. forward and 9 ft. aft, and she arrived in Bombay harbour on the 8th September 1885. After that date the "Vaiturna" was employed in the passenger trade from this port up and down the western coast. She was swung for deviations of her compass on the 13th September last by Captain Crowder, and on the 14th September last obtained certificate of survey, No. 688, under Act VII. of 1884, and a certificate A. under Act X. of 1887 on the 15th day of September last, under which she was permitted to carry in the fair season (1st September to 15th May) 1,485 passengers between Bombay and Revdanda, and 1,047 between Revdanda and ports to the south, and in the foul season (16th May to 31st August) 367 passengers between those ports.

6. On the 5th November last she obtained a certificate B. under Act X. of 1887, and left Bombay about

7.30 a.m. on that day, on a voyage to Cutch-Mándvi, in command of Captain Cassambhoy Ebram, who held a certificate of competency as master, Indian Foreign Trade, No. 118, dated 18th November 1872, granted by the Local Government, with two officers and three engineers. The first mate held a master's certificate from the Government of Bombay, and the second mate also held a certificate. The chief engineer and second engineer held engine-drivers' certificates granted by the Bombay Government. She had a full complement of officers and men (a list of their names and designations is hereto annexed), and 310 passengers, 60 tons of West Hartley coal and about 33 tons of fresh water (25 tons in her forward tank, 4 tons in another tank, and 6 tons in two other small tanks). She was fully equipped with instruments and charts necessary for the service in which she was employed. There was one aneroid barometer. She had 3 lifeboats and 1 cutter fully equipped; 100 cork life-buoys; 12 cork lifebelts; 12 blue lights; 12 rockets; 24 distress socket rockets with proper socket fittings; 2 patent flare-up lights, and 6 Holmes' patent lights. She was fitted with electric and kerosine side and mast-head lights, and carried the usual fog signals. She carried a deviation card of her compasses, furnished by Captain Crowder. There were tarpaulins and battens all ready to close her two hatchways and her engine skylight, if necessary.

7. She arrived safely at Cutch-Mándvi at 1.30 p.m. on the 6th of November, and discharged all her passengers. She consumed on that voyage about 22 tons of coal. After laying off Cutch-Mándvi she left that port at 8 o'clock a.m. on the 8th on her voyage towards Bombay with a number of passengers. Tickets were issued to 2 deck passengers for Dwárka, 6 deck passengers for Porbandar, 75 bridge passengers, and 435 deck passengers for Bombay. She called at Dwárka on that day between 11 and 12 a.m., and landed 2 passengers and took on board a number of other passengers. Tickets were issued to 66 deck passengers for Porbandar and 118½ deck passengers for Bombay. From the number of tickets issued it would appear that she left Dwárka with not less than 703 passengers, but there must have been many more, as children under one year are free, and no tickets are issued for them, and to children under twelve half-tickets are issued, the numbers of which are not entered on the two lists produced.

8. She called off Porbandar about half-past 5 p.m. on that day. She came within $\frac{1}{4}$ ths of a mile off the bandar, whistled on her arrival, did not anchor, waited 5 or 7 minutes, whistled again, and proceeded on her voyage. There was then a strong wind a little south of east and a very rough sea, too rough for passengers to be taken on board or landed. She was seen off Mángrol about 9 o'clock that night proceeding towards Bombay. She was recognized by her electric lights. It was then stormy weather. In due course she ought to have arrived in Bombay on the afternoon of the 9th, but has not up to this date arrived here nor been heard of.

9. As the vessel did not arrive on the 9th, telegrams were sent by the company from Bombay to the different ports where she might have touched, and they ascertained she had passed Porbandar but could not land passengers on account of the roughness of the weather, and had been seen passing Mángrol. On the evening of the 10th the s.s. "Neera" of the same company was despatched to search for the missing steamer, and called at all ports between Jáfarabad and Bate, and returned to Bombay *via* Bhávnagar on the 17th November. On her return a report was made by the captain stating he could find no trace of her. On the 14th of November the company despatched their steamship "Savitri" to search, with instructions to call at all ports between Bombay and Karáchi, and to search across the locality in which the "Vaiturna" was last reported to be. On her return on the 28th of November the captain of the "Bheema," who went with the "Savitri" in the search, made his report, stating he could find no trace of the "Vaiturna." The chart showing the tracks on which she had sailed was produced before this Court. Boats were also sent out to search for her from most of the bandars along the coast, but they found no trace of her. On the 12th November the company informed the port officer about the missing steamer. The company also sent a telegram to the Sultan of Muscat respecting the missing steamer.

10. When the "Vaiturna" left Cutch-Mándvi on the 8th of November, the company's agent states there was nothing wrong with her. The captain and all her crew were on board. The sea was very quiet, and the sky was bright and clear.

11. The agent of the company at Dwárka states when the steamer left there the sea was smooth. There was no indication of a storm. Everything appeared right on board.

12. The agent of the company at Porbandar states a storm commenced at about 4 p.m. on the 8th, and there was a strong wind a little south of east. The sky became unusually dark, and it was very cold. The sea was running too high for a boat to take passengers on board. The storm increased very much that night and blew very hard. The wind blew from a little south of east all night, accompanied with rain, and at about 8 or half-past 8 the next morning the wind changed its direction and began to blow from the north. That wind caused much damage to property. One dhungy went down at sea, and several boats were damaged in the creek.

13. The agent of the company at Mángrol states the night of the 8th was stormy. It began about 4 o'clock in the afternoon. The wind was from the west. It got worse as the night came on. The wind changed at 1 o'clock the next morning, and commenced to blow from the south, and blew very hard till about 10 or 11 o'clock. At 1 o'clock that morning the gale was at its worst. Two or three kotias were wrecked during the morning, and five or six boats were wrecked during the night. Many of the houses were damaged, and many trees blown down.

14. Mr. Frederick Chambers, who was meteorological reporter for Western India up to the end of July last and who has since continued his scientific researches, states from observations recorded in all the small observatories in Western India and from the logs of ships, &c., that a cyclone passed across the Káthiáwár coast between 8 a.m. of the 8th and 8 a.m. of the 9th November last. It crossed from the Madras coast on the 1st of November, passed out into the Arabian Sea near Mángrol on the 2nd, and continued to move out to sea until the 6th, when it was in longitude 67° E. and latitude 16° N. It then curved round towards the north-east, and reached the Káthiáwár coast on the 9th. On the 10th it was over the Gulf of Cutch. He states if he had had telegraphic observations from inland stations on the 8th, it would certainly have been possible to have given warning of the cyclone on the 8th. There were slight indications of it even on the 7th. The barometer was considerably below the normal height along the coast of Káthiáwár and in Lower Scinde, and the wind showed a tendency to circulate in a cyclonic manner. On the 8th the indications of the approach of a cyclone were very definite, and the centre of the cyclone was then about 200 miles to the south-west of Porbandar. The abnormal winds at that time were very decidedly cyclonic. The cyclone was not a very severe one.

15. Mr. Jamsetji Dhunjibhoy Wadia, shipwright surveyor to the port, states the vessel was surveyed by him and Mr. Seabrooke in dry dock on the 7th September last, and they filled up a joint declaration under the Act. He states she was equally as well found as any mail steamer he had ever surveyed, and in his opinion she was quite stable even with the upper deck full of passengers.

16. Mr. Moir, the superintending engineer of Messrs. Shepherd and Company, states he knew the vessel well. She was specially built for the Indian coasting passenger trade. She was fully equipped when she last left this port. He considered her an unusually stable vessel because she was so broad for her length. Her proportion was 6'4 to 1. Her engines and boilers were placed low down as well as her bunkers, which gave her large righting powers.

17. Mr. George Mackrow, constructor in the Government dockyard, Bombay, who stated all his life had been spent in designing and building ships, said he had examined the plans and model of the "Vaiturna," and had seen her register. In his opinion, if she had 700 passengers on board, 75 being on the awning deck and the rest on the main deck and in the holds, and had 30 tons of coal and 30 tons of water on board, she would be perfectly safe and stable in a rough sea. He also said if she had more ballast in her she might be less safe. She might strain as she was so lightly built. He was of opinion that with her draught of water, her freeboard, position of Plimsoll's mark, and with those passengers distributed as mentioned, and that quantity of coal and water on board, she would not be top heavy,

and he thought she would be just as capable to encounter a storm with the passengers in that position as with the weight lower down. He also thought a vessel of the class of the "Vaiturna" was rather lightly built to encounter a cyclone of any violence with safety.

18. And there is the opinion of Mr. McIntyre, who came out as chief engineer in charge of her. He states he considered the "Vaiturna" was capable of passing safely through a cyclone unless a sea broke through her hatches or sky-light, or her engines broke down, or water got into her stokehole and washed out her fires. He says in the bad weather she encountered on her passage out here she never strained at all. She was very lively in the water.

19. Haji Ismail Hassam, one of the firm of Messrs. Shepherd and Company, states he knew the captain of the "Vaiturna"; that he had been in their service about 22 years; that he was a good seaman and an able navigator, and had never met with any accident. That Vuliji Mahomed, the first mate, had been in their service for about 20 years, and was a good and careful seaman, and had acted as captain for about a year. That Munsoor Ali, the chief engineer, had been in their employ 14 or 15 years, and was a competent and careful engineer, and that the other officers and crew were thoroughly efficient.

20. Mr. Moir, who has been in the service of the company for three years, speaks highly of the efficiency of the officers and engineers. And Mr. Jamsetji Dhunjibhoy Wadia states he knew the captain for the last 20 years; that his opinion of him as a seaman was very high, and that he believed him in every way quite capable of commanding a steamship, and that in case of an emergency he could be trusted to do everything that could be done, and that he was a brave man. Mr. Wadia also states he has known Vuliji Mahomed, the first mate, for the past four or five years, and that he was a capable officer.

21. A list of the exhibits produced is hereto annexed.

22. After a careful consideration of the evidence the Court are of opinion that the steamship "Vaiturna," when she left Bombay on the 5th of November last on her voyage towards Cutch-Mándvi, was sufficiently manned and fully equipped. Her hull and machinery were in good order. She had complied with all the provisions of the Acts then in force respecting a steamer of her class; that she was last seen off Mángrol about 9 o'clock at night on the 8th, making towards Bombay; that during the night of the 8th and the morning of the 9th of that month a cyclone of considerable violence passed along the Káthiáwár coast from the south; and that she encountered that cyclone and foundered in it with all hands.

23. The Court are indebted to the able researches of Mr. Frederick Chambers in great part for the record of this cyclone, which crossed India and entered the Arabian Sea on November the 2nd in latitude 13° N., took a west by north track till it reached longitude 68° E. on November the 5th, then curved suddenly to the N.N.W. and N. till it reached latitude 18° N. and longitude 66° 30' E., then recurved to the N.E. on November the 8th. The centre at 8 a.m. on that day was in latitude 20° N. and longitude 68° E. At 8 a.m. on November the 9th it was at the entrance to the Gulf of Cutch. On November the 10th it was near Bhúj. At 5.30 p.m. on November the 8th the centre of the cyclone would be bearing from Porbandar about S.S.W., distant about 90 miles, and approaching the path of the "Vaiturna" at about eight miles an hour. Two of the B.I.S.N. Company's steamers encountered this cyclone, the "Purulia," in latitude about 19° 48' N. and longitude 71° 49' E. on the morning of the 9th on her way from Karáchi towards Bombay, and the "Pachumba" on the night of the 8th off the Káthiáwár coast on her way from Bombay to Karáchi, and she had to lay to for about 5 hours.

24. There must have been clear indications of the approach of this cyclone in time for Captain Cassumbhoy Ebram with a vessel of the "Vaiturna's" speed if he had carefully watched his instruments and the weather to have avoided the greater force of this cyclone by putting back and taking shelter behind Bate as the storm was probably not approaching his course at a greater speed than 8 miles an hour. From his not doing so the Court infer that he was unacquainted with the law of storms.

25. It appears that if a proper storm-warning system had been in force, with communications to most of the northern ports, intimation could have been conveyed in time to have enabled the "Vaiturna" to avoid this cyclone.

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26. The Court think the vessel was very lightly built, so much so that any additional ballast besides the passengers and weights she was then carrying would have had the effect of causing her to strain in a sea-way. She had no dead weights in her holds beyond her machinery, water, and coal, excepting the weights that were of a moveable nature—human beings—who were placed on the awning main deck, and also in the holds. In a heavy sea-way no doubt there would be a great probability of their being thrown on the leeside of the ship, which would cause a considerable list. The awning deck, too, if struck by a squall common to cyclones, would be a source of the greatest danger, and might, if struck by such a squall, with the passengers thrown on the leeside, cause her to list over so much that she would not be equal to righting herself again, and she would founder.

27. The Court consider the vessel was not sufficiently strongly built to enable her to safely weather a cyclone at sea. Vessels going to the northern ports on this coast where there are few ports that vessels can put into in bad weather, and no storm-signal stations, require to be fit to contend against any weather. To the southward, as far south as Kárwár, the ports are numerous, and in case of bad weather vessels can put into one of them.

28. The vessel was manned with able and experienced officers who have been spoken of most highly by several witnesses well able to form an opinion of their capabilities. She had an Admiralty certificate stating she was placed on the list of merchant vessels fit for State purposes, but it does not state if for river or sea service.

29. The firm of Messrs. Shepherd and Company at once on the vessel not arriving here at her due time did all that was possible to try to discover traces of the unfortunate vessel. By this sad catastrophe more than 740 persons, including the captain, officers, crew and passengers, lost their lives.

30. The Court would call the attention of Government to the want of a proper system of meteorological observation and exhibiting storm warning signals on the coast of India. They would also suggest the desirability of a text-book of the law of storms as taught to candidates for the certificates of competency of the Board of Trade being translated into Gujaráthi and

other Indian languages and circulated amongst officers and seamen, and that notice should be given that the law of storms will be a subject in which candidates for master's certificates in the Indian home trade will be examined, and that one year's notice might be given of a knowledge of this subject being required.

31. The present system of granting passenger certificates to vessels appears to be unsatisfactory. The surveyors to the port merely grant a certificate for the number of passengers for whom berths are fitted in the saloon, but they do not state the number of deck passengers the vessel is capable of carrying. On the strength of this certificate the Customs Preventive Department measure all available spaces on deck and fix the number of passengers the vessel can carry, and there is nothing in the rules that would prevent another awning deck on top of the present one being measured for passengers, although it would make the vessel still more unseaworthy. The Court are of opinion that the number of passengers a vessel should be allowed to carry should be decided by persons capable of working up the stability of a vessel, and not left to an officer of the Customs department. The Customs department is of course quite capable of dealing with ordinary sea-going vessels, but it appears necessary in the interests of the passengers that a check should be maintained over the coasting vessels of this port to ensure the safety of the lives of passengers. The fact of a vessel of so small a net registered tonnage as 68½ tons being allowed to carry 1,047 passengers on a coasting voyage and as many as 1,485 from or to Revdanda speaks for itself.

32. In conclusion, the Court express their deep sympathy with the relatives and friends of the captain, officers, crew and passengers who have lost their lives in the foundering of this vessel.

(Signed) C. P. COOPER,
Chief Presidency Magistrate.
M. BEAN,
Assistant Port Officer.
J. DE HORNE,
Commanding the P. & O.
Company's s.s. "Surat."