

(No. 155.)

## "HUGHENDEN" (S.S.).

IN the matter of an Inquiry before Commander WARREN FREDERICK CABORNE, C.B., R.N.R., Inspector for the Board of Trade, into the nature and causes of the accident that occurred to the British steamship "HUGHENDEN" (Official Number 109709), of the port of Sunderland, off Ushant, on or about the 21st day of December, 1911.

*Report.*

SIR,

I HAVE the honour to inform you that in virtue of my appointment from the Board of Trade, under Section 728 of the Merchant Shipping Act, 1894, dated the 1st day of April, 1912, I held an inquiry into the above casualty at the Custom House Buildings, Sunderland, in the County of Durham, on the 23rd and 24th days of April, 1912.

Mr. William S. Burton (Messrs. Watson, Burton and Corder), solicitor, Newcastle-upon-Tyne, conducted the proceedings on behalf of the Solicitor to the Board of Trade (Sir Robert Ellis Cunliffe), and Mr. Richard S. Middleton, solicitor, Sunderland, represented the owners of the vessel and the relatives of the master.

The "Hughenden," Official Number 109709, was a British single-screw steamship, built of steel at Sunderland, in 1900, by Messrs. J. L. Thompson and Sons, Limited, North Sands, and was registered at the port of Sunderland.

She had a clipper bow with figure-head, was rigged as a two-masted fore and aft schooner, and was of the following dimensions:—Length from the fore part of stem, under the bowsprit, to the aft side of the head of the stern post, 342.3 feet; main breadth to outside of plank, 45.3 feet; depth in hold from tonnage deck to ceiling at midships, 24.1 feet; and depth from top of deck at side amidships to bottom of keel, 26.78 feet. Her gross tonnage was 3,096.96 tons, and her registered tonnage 2,009.39 tons.

She was built on the cellular double-bottom principle, and was provided with six steel water-tight bulkheads, carried right up to the spar deck.

Her co-efficient of fineness was .7896, which shows that her model was about that of an average cargo steamship.

She was constructed with a top-gallant forecastle 34 feet long, a bridge 95 feet long, and a poop 40 feet long, these erections being 7 feet high. The forward well deck was 78 feet long and the after one 96 feet long. These wells had bulwarks 3 feet 9 inches high, provided with four wash-ports, in two pieces, on either side of the ship, each measuring 36 inches by 18 inches, and situated two before and two abaft the bridge. She also had an iron bulwark 3 feet 3 inches high round the bridge deck, provided with ports for the ash shoots.

There was a doorway, 2 feet 6 inches wide, fitted with steel water-tight doors, in front of the enclosed under-bridge space on each side of the ship. There were openings in the after end of the bridge on each side, weather boards and fastenings for the same being furnished for closing them when necessary. There were also two doorways, 3 feet wide, in the front of the poop, for the closing of which provision had not been made by the builders.

The engine-room skylight, which was about 10 feet 9 inches above the bridge deck, was made of steel, and had two strong bull's-eye lights in each shutter.

The fidley casing was 7 feet high, had iron doors on either side, and was fitted with a hinged iron cover.

The master's accommodation was in a house on the fore part of the bridge deck (the chart-room and wheelhouse being above it), and the officers' and engineers' quarters were on the after part of the bridge deck alongside the engine-room skylight, respectively

on the starboard and port sides. The crew were berthed under the top-gallant forecastle.

The "Hughenden" was propelled by triple-expansion engines of 296 nominal horse-power and 1,250 indicated horse-power, designed to give her a speed of  $9\frac{1}{2}$  knots per hour, and was fitted with two steel boilers, having a working pressure of 180 lbs. to the square inch. She also had a donkey boiler, pressed to 180 lbs.

She had a circulating (sea or bilge) pump, two 4-inch bilge pumps, one ballast donkey pump, with a capacity of 100 tons per hour, and another small donkey pump equal to 30 tons per hour. The pumps had all necessary connections to ballast tanks and all compartments.

The engines and boilers were manufactured by Messrs. George Clark, Limited, of Southwick, Sunderland, at the same time that the vessel was built.

In addition to the pumps enumerated above, there was a Downton's hand pump, with connections to all compartments.

The vessel was furnished with steam steering-gear, by Messrs. John Lynn and Company, of Sunderland, the steering-wheel being in the wheelhouse on the upper bridge and the engine under the after part of the lower bridge, rods and chains, with a spring buffer on each side of the poop, leading to the quadrant. Hand gear was also provided on the poop.

She had four cargo hatchways, each measuring 24 feet by 14 feet 6 inches, all furnished with two athwartship beams, three fore-and-afters, hatches of  $2\frac{1}{2}$ -inch red wood, and the necessary cleats and battens.

There was a hatchway, measuring 8 feet 9 inches by 16 feet 6 inches, on the bridge deck, leading to the reserve bunker, and two bunker hatchways, each measuring 4 feet by 2 feet 6 inches. The poop had one hatchway, equalling 8 feet by 8 feet. All the hatchways could be properly secured.

Nos. 1 and 2 holds were each ventilated by two 18-inch cowl ventilators, having 12-inch internal tubes to the lower holds; the bunkers by two 17-inch ventilators through a derrick; the stokehold by two 21-inch cowl ventilators; the engine-room by two 18-inch cowl ventilators; Nos. 3 and 4 holds each by two 18-inch cowl ventilators, with 12-inch tubes to lower holds; and the tunnel by a 6-inch ventilator through the after derrick. The flanges of the ventilators on the spar deck were 5 feet high, and on the erections 3 feet high. Covers were supplied for the ventilators and wooden plugs for the flanges.

As before stated, the ship had six steel water-tight bulkheads, namely: No. 1, the collision bulkhead; No. 2, between No. 1 and No. 2 holds, with two water-tight doors in the between decks; No. 3, separating No. 2 hold from the stokehold, with two water-tight doors to the lower hold, measuring 30 inches by 20 inches, worked by a screw and rod from the stokehold upper platform, and two small water-tight doors to the reserve bunker (which occupied a portion of No. 2 between decks only); No. 4, the engine-room bulkhead, with a water-tight door to the tunnel, measuring 30 inches by 20 inches, worked by a rod and screw from the top platform of the engine-room, and another small water-tight door on the port side of the main (or between) deck; No. 5, separating Nos. 3 and 4 holds, with water-tight doors in the between decks; and No. 6, the after peak bulkhead.

In the between decks there were sixteen trimming hatchways, or feeders, with covers, two of these hatchways being in No. 1 hold, four in No. 2 hold, six in No. 3 hold, and four in No. 4 hold. They each measured 2 feet 6 inches by 2 feet.

The midship-hold stanchions and the between-deck stanchions were respectively 4 inches and  $2\frac{3}{4}$  inches in diameter, and were 22 in number before the engine and boiler space, and 17 abaft it.  $2\frac{1}{2}$ -inch iron stanchions were placed opposite to and parallel with them for shifting boards to be placed between, which latter were supplied when the ship was built of  $2\frac{1}{2}$ -inch white wood. There were also shifting boards fitted under the fore part of the bridge, but no provision was made for them in the cargo space under the poop.

The ship had water-ballast tanks, 3 feet 4 inches high from forward to No. 4 (engine-room) bulkhead,

and 5 feet 6 inches abaft that, of the following capacity:—

	Tons.
No. 1 (fore) ... ..	94
No. 2 (main) ... ..	225
No. 3 (engine-room, fresh water) ... ..	63
No. 4 (after main) ... ..	197
No. 5 (after) ... ..	102
No. 6 (after peak) ... ..	68
No. 7 (after peak between decks) ... ..	99
<b>Total</b> ... ..	<b>848</b>

The gross cubical capacities of the different cargo spaces were as under:—

	Cubic Feet.
No. 1 hold ... ..	37,033
„ between decks ... ..	15,650
No. 2 hold ... ..	59,809
„ between decks ... ..	19,330
No. 3 hold ... ..	41,074
„ between decks ... ..	21,966
No. 4 hold ... ..	23,661
„ between decks ... ..	15,086
Reserve bunker (between decks) ... ..	8,170
Bridge ... ..	17,412
Fore peak between decks ... ..	1,365
Poop ... ..	7,589
<b>Total</b> ... ..	<b>268,145</b>

On the 18th of August, 1900, the Committee of Lloyd's Register of British and Foreign Shipping approved, on behalf of the Board of Trade, of a minimum winter freeboard for the ship of 5 feet 3 inches, and on the 30th of July, 1906, this was decreased by the same authority to 5 feet 2 inches.

It should be added that the vessel was built under special survey to the highest class at Lloyd's.

She carried four boats (two of them lifeboats) with their proper equipment. The two lifeboats were placed under davits, in chocks, on skids, abreast of the engine-room skylight, and the other boats were similarly placed abreast of the chart-room, the jolly-boat on the port side and the cutter on the starboard side.

For other life-saving appliances, she had six life-buoys and a life-belt for each member of the crew, as also some spare ones.

Lastly, she was owned by the Hughenden Steamship Company, Limited, of Baltic Chambers, Sunderland, Messrs. John Henry Charlton and James Thompson, both of the same address, being the managers, by advice under the seal of the Company received on the 24th of August, 1900.

The "Hughenden" was purchased by the above Company from the builders immediately after her launch for the sum of £45,300, and they had spent some £10,585 on her since.

In January, 1909, she passed her No. 2 survey at Sunderland, upon which occasion £5,681 were expended, but this amount included the repairs to bottom due to an accident, and is taken account of in the before-mentioned £10,585.

While dealing with the financial question, it may be stated that in June, 1909, when she last left the United Kingdom (she had been trading abroad ever since), her value was given at about £26,000. When she left Smyrna on the voyage which formed the subject of this investigation, her owners estimated that her market value was about £22,000 or £22,500; and her value in the Company's books at that time was £33,600.

Her hull and machinery were insured for the agreed figure of £28,000 on twelve months' policies from the 28th of February, 1911, the premium being £5 10s. per cent. The freight was insured for £2,650, its value being £2,640; and there was a policy for £1,200 on premiums, reducing £100 per month. There were no insurances on disbursements; and the owners took the risk of small damage.

The vessel was overhauled in dry dock at New York in June, 1911, and in November and December, 1911, she was at Smyrna, where she was to load a cargo of grain for the United Kingdom under the terms of a charter-party concluded by the owners and Messrs. C. Variparti, of Great St. Helen's, London, dated the 13th of November, 1911.

It may be remarked that she had previously carried grain cargoes. Once from St. Petersburg to London,

in August, 1900, and upon another occasion from Odessa to Hamburg, in March, 1902. In the first-mentioned instance she was loaded in accordance with the Board of Trade Regulations, and in the second instance according to "special plan."

The master who was in her at the time of the present casualty had never previously carried a cargo of grain in the ship during his tenure of the command.

Having completed her lading, the "Hughenden" left Smyrna at 6.30 a.m. of the 6th of December, 1911, bound for Dublin, with a cargo consisting of 26,682 quarters (equalling 4,764 tons) of barley, all of which was in bulk with the exception of 1,877 bags; manned by a crew of 27 hands, all told; and under the command of Mr. J. Barkess, who held a certificate of competency as master, numbered 001736, and whose name had been on the ship's register since the 18th of February, 1909.

According to the certificate signed by the master at Smyrna before leaving, her draught of water was 21 feet 6 inches forward and 22 feet aft, the mean draught being 21 feet 9 inches.

In due course the pilot left the ship off Pelican's Spit, and she proceeded on her voyage.

On the 12th of December she put into Bona for coal, of which she was in danger of running short owing to the prevalence of a strong head wind, and there took in 50 tons.

On the 14th of December she took in a further supply of 220 tons of coal at Algiers, and sailed thence for home on the same day.

All appears to have gone well until the 20th of December, when the weather came in bad, the wind being S.S.W. or S.W.

At 1.45 a.m. of the 21st of December, a light was seen bearing about four points on the starboard bow (the ship's course is uncertain), which the second officer told the man at the wheel (one of the survivors) was Ushant.

It was blowing strong, there was a good sea on, and the wind was a little on the port quarter.

About 6.30 a.m. it was blowing very hard from the south-westward, there was a very heavy sea running, and water was flying over the ship fore and aft.

At this time the neck of the fore end of the spring buffer connected with the starboard wheel chain carried away. The hand steering-gear was brought into requisition and the starboard chains of the steam steering-gear were connected up with shackles, and steam once more used, but in a short time the corresponding connection with the port spring buffer broke.

The hand-gear was again shipped, two men being at the wheels (the hand-gear had a double wheel), and the master decided to heave-to. However, while executing this manoeuvre, a heavy sea struck the ship on the port quarter, causing the rudder to give a kick sufficient to break the port arm of the steering-gear.

It was found impossible to repair the port chain of the steam steering-gear, owing to the heavy sea, the starboard arm of the hand steering-gear also broke, the engines were stopped, and the vessel wallowed in the trough of the sea.

Up to the time of the steering-gear breaking down there had been no perceptible list, but after the ship commenced to roll in the trough of the sea she listed to starboard, and about 8 a.m. was nearly on her beam ends.

The second officer, while trying to connect up the steam steering-gear, was washed under the quarter blocks and had one of his legs broken.

About 8 a.m. one of the ordinary seamen, name unknown, was washed overboard and drowned.

About 9.15 a.m. one of the German sailors was also washed overboard and lost.

The master, too, was washed from one side of the deck to the other, apparently receiving injury to his ribs.

It seems that during the morning the battens of the hatches had been examined.

Although the engines were not being worked, steam was maintained, although not without much difficulty, owing to the way in which the ship was lying over.

There was some water in the stokehold, it being about knee-deep on the starboard side, but, apparently, this was only the usual amount of bilge water, plus some water that went down through the sidley gratings, the iron cover of which had not been put down, and through the doors.

About 11 a.m. the master gave orders to the crew to put their lifebelts on and to prepare the lee boats,

but upon going to them they were found to have been smashed by the sea.

It was, of course, impossible to make any attempt to lower the weather boats, but they were cast adrift, with the exception of their falls, the crew got into them and stood by for the final plunge of the ship, the master being in charge of the jolly-boat and the chief officer in charge of the lifeboat.

About noon the "Hughenden" capsized. At the last moment the falls of the lifeboat were cut, but her gunwale appears to have been fouled by one of her davits, and she was capsized and her occupants thrown into the sea. A like fate seems to have befallen the jolly-boat.

The ship remained afloat in an inverted position for some little time and then finally disappeared.

Previous to the capsizing of the "Hughenden," which was flying signals of distress, a steamship, subsequently ascertained to be the "Devonshire," of Glasgow, had been observed, and after the accident she steamed to the immediate vicinity of the disaster with a view to rendering assistance to any of the survivors, and succeeded in rescuing an able seaman, named John McNeil, and a fireman, named Alexander Brandt, both of whom had been in the lifeboat and had succeeded in securing some floating wreckage, by means of lines. The third officer of the "Devonshire" very gallantly jumped overboard with a line and went to the assistance of McNeil, who was unable to use one of his arms and so could not hang on to a rope.

The remainder of the "Hughenden's" crew lost their lives.

The two survivors, who were treated with every kindness, were conveyed to Lisbon by the "Devonshire," there landed, and subsequently sent home by His Majesty's Consul-General.

The following is a written statement by Mr. E. Hart, master of the steamship "Devonshire," dated at Lisbon, the 28th of December, 1911:—

"Report of the foundering of the s.s. 'Hughenden,' 21/12/11. Noon. Wind S.W., hurricane force with violent squalls, high seas, after deck full of wreckage of horse fittings and deck cargo, steering-gear smashed, steering with after hand steering-gear; sighted a steamer flying signals of distress. She was in the trough of the sea, on her starboard beam ends, signalling; 'I am sinking.' We bore down upon her as close as was prudent with our defective steering-gear—she proved to be the s.s. 'Hughenden,' of Sunderland. A heavy squall came down, thick with rain, obscuring everything. When the squall cleared, found 'Hughenden' had capsized. We immediately steamed to leeward of her. She then foundered. No boat would have lived in such a sea; so we manoeuvred among the floating wreckage and managed to pick up two men, named Brandt and McNeil. The weather was very cold at the time, and we saw some of the others, too numbed to hold on to the wreckage, let go their hold and drowned. We stood by till dark in the hope of saving more, but found no signs of life, and then put our vessel head to wind and sea, hurricane still blowing.

"Position: Lat. 48° 15' N., Long. 7° 2' W.

"(Signed) E. HART,  
"Master."

It is a chapter of singular coincidences that the "Devonshire's" steam steering-gear should have been disabled at the time that she picked up the survivors of the "Hughenden," and that on the same date the steamship "Guillemot" (which also foundered) was in the same fix, as shown by the official report of the Court which inquired into the circumstances of her loss.

The points now to be considered are:—

- (a) Whether the cargo of the "Hughenden" was properly stowed and secured from shifting;
- (b) Whether she was overladen; and
- (c) What was the cause of her capsizing.

There appears to have been a choice of three methods by which the barley might have been laden:—

- (a) That under the Eighteenth Schedule of the Merchant Shipping Act, 1894;
- (b) That under Regulations (Mediterranean and Black Sea) approved by the Board of Trade;

or

- (c) That under plans of loading, approved by the Board of Trade, for vessels loading grain at ports in the Mediterranean and Black Sea.

The plan for the "Hughenden," with the conditions imposed by the Board of Trade (copies of which were on board the ship), were produced to me.

Two of the above-mentioned methods, (a) and (c), may, I think, be eliminated from consideration, inasmuch as the master in his statutory certificate, dated Smyrna, the 5th of December, 1911, stated that the "Hughenden" was loaded under "Regulations approved by the Board of Trade for carriage of barley from Mediterranean."

Therefore, the question now arises as to whether she was laden in accordance with the last-named regulations.

Section 2 of those Regulations provides:—

"In the case of ships having two decks, oats, cotton seed, or barley may be carried in bulk in the 'tween decks, provided that—

- (a) Grain-tight feeders be fitted from the lower hold through the hatches to the uppermost deck; such feeders to contain not more than six per cent. and not less than three per cent. of the quantity carried in the hold or compartment they feed. These feeders must not interfere with or decrease in any way the two per cent. which is required to feed the grain carried in the 'tween decks.

"Or (in lieu of the regulation contained in the paragraph (a) above) may be substituted the following:—

- (b) That the between deck hatches shall not at any time be put on; and

- (c) That strakes of the deck be lifted, or if the deck is an iron deck, sufficient openings be made through the deck in the wings, which, with the open hatches, shall admit of the cargo in the between decks feeding the lower hold.

The regulations contained below shall also be observed whether the ship is loaded under the regulation contained in paragraph (a) above, or in accordance with the regulations contained in the paragraphs (b) and (c) above; that is to say:—

- (d) There shall be longitudinal grain-tight shifting-boards in accordance with Clause 3 of the Eighteenth Schedule of the said Act, and the grain shall be properly stowed, trimmed, and secured, as required by Clause 4 of the said Schedule.

- (e) Feeders shall be fitted to feed the grain carried in the between decks, such feeders to contain not less than two per cent. of the compartments they feed. If strakes of the deck be lifted, or sufficient openings are left to enable the grain in the 'tween decks to feed the lower holds, then it is obvious that the feeders must contain at least two per cent. of the compartments they feed, i.e., the 'tween decks, plus the lower hold.

- (f) The space in the 'tween decks in which the grain in bulk is carried shall be boarded at each end by grain-tight transverse bulkheads or partitions extending from deck to deck.

- (g) The ship shall not be overloaded."

As I have already pointed out, the vessel was fully provided with shifting boards when she was first built, and the sum of £164 14s. 9d. was spent at Smyrna in making them complete and in providing the necessary shores, while a further sum of £15 16s. 3d. was expended upon labour, nails, &c. According to the deposition of François Rivans, carpenter, Smyrna, the thickness of the shores was 6 inches, thinning down to 4½ inches; and there were 20 large ones and 8 small ones in each hold, i.e., 10 large ones and 4 small ones on each side.

John McNeil, A.B. (one of the survivors), stated that shifting boards were put up in all the holds fore and aft; that they were so close together that grain could not pass through, so far as he could see; that some new boards were supplied at Smyrna; that the shifting boards were shored up on each side; and that there was a trunkway only in No. 3 hold.

As before stated, the vessel had sixteen trimming hatches in her between decks, distributed over her various compartments.

With regard to the provision of trunkways or feeders in the different hatchways, Lambros Louvalis, the stevedore at Smyrna who loaded the cargo, in a deposition, dated the 3rd of March, 1912, stated that: "A feeder was made in the middle section of No. 3 hold. It was a square, with sides of three metres, made of wooden boards, 2½ inches thick, nailed together. It was only in No. 3 hold." And again: "The feeder made in the middle section of No. 3 hold was the only feeder throughout the ship." He also spoke to the shifting boards and the manner in which they were secured, believed, but was not certain, that there were some athwartship bulkheads (presumably in the between decks), said that the grain cargo was stowed right up to the beams, but did not reach above them; that the bags of grain, which were only placed in the fore peak between decks, under the bridge, and in the poop (estimated by the shipper to equal about 170 tons), were stowed a-burton right up to the beams; that the quantity of bulk grain carried for feeding, which was placed in the feeder, was just enough to fill the lower hold, and that the vessel herself was in excellent condition, with her cargo well stowed and her equipment complete.

Alexander Brandt (a fireman, and the other survivor) stated that there were trunkways in Nos. 1 and 2 holds, but that he knew nothing about No. 4 hold. Thus, there is some conflict of evidence upon this point.

McNeil stated that the lower hatches were put on in all the holds. Taking No. 3 hatchway, where, without doubt, a trunkway was constructed, some of the lower hatches would necessarily be on, but if all were in position, there would have been an absence alike of sense and utility in building a feeder down to them. It is noteworthy that No. 3 was the only compartment in the ship that contained a single shipment. Therefore, as regards No. 3 hold, I am satisfied that all the lower hatches were not on. If the lower hatches were on in the other compartments where, according both to the stevedore and McNeil, there were no trunkways to the lower holds, then there was a distinct contravention of sub-section (b) of Section 2 of the Regulations, but upon this point there was no evidence other than that of McNeil. There appear to have been two shipments in each compartment other than No. 3, and there was some bulk grain carried in the upper after peak tank. If it is correct that the feeder in No. 3 hold was the only one throughout the ship, then, even if all the other lower hatches were off, sub-section (c) of the Regulations was not complied with.

When the cargo was completed, the upper hatches were put on, covered over with three tarpaulins, and battened down.

I was informed that grain-laden vessels arriving in the United Kingdom are inspected with a view to ascertaining whether they have been properly loaded, but I am of opinion that it would be preferable if they were inspected by competent authority at their loading ports.

After very careful consideration, I am of opinion that the "Hughenden" was not properly laden in accordance with the Regulations approved by the Board of Trade.

The next question is as to whether the vessel was overladen. According to the draught given by the master on leaving Smyrna, the ship had about half-an-inch of freeboard to spare, but, according to the weight of cargo and the amount of coal (150 tons) said to have been on board, it should have been, according to the displacement scale, about 2½ inches. Probably the difference was due to stores, fresh water for the boilers, &c.

The owners estimated that there were 230 tons of coal on board when the ship left Algiers. Working back I make the amount slightly more, but, allowing for head winds encountered before arriving at and after leaving Bona, and also possible short weight, I have accepted those figures.

The deadweight, therefore, upon leaving Algiers would be 4,994 tons, which, with an allowance of, say, 15 tons for fresh water and stores, would give her a mean draught of 21 feet 10½ inches, or an over immersion of ¾ of an inch. However, at the time of the

casualty she would have had four inches more than the required freeboard.

I now come to the cause of the capsizing, which may be divided under two heads:—

- (a) The breaking of the steering-gear, which rendered the ship unmanageable; and
- (b) The falling of the vessel into the trough of the sea, which made her roll heavily, and brought about the shifting of the cargo, very probably through some of the shores and shifting boards having given way.

In a protest signed by the survivors at Sunderland on the 9th of January, 1912, it is stated that: "The vessel being at the mercy of the wind and sea listed heavily to starboard, and it was noticed that some of the hatches had been carried off No. 3 hold. Huge seas continued to break on board, and the water getting among the cargo the vessel showed signs of sinking." However, at the inquiry both these men stated that they were unable to say whether or not any water found its way into the holds. McNeil said that he saw one of the corners of a tarpaulin on No. 3 hatch was adrift; on the other hand, Brandt said that he could see both Nos. 3 and 4 hatches, and that there was nothing the matter with them.

But for the disablement of the steering-gear, it is probable that this casualty would not have occurred.

I have already mentioned that the third officer of the "Devonshire" jumped overboard with a line and rescued John McNeil. In the weather that prevailed—the severity of which is fully vouched for in this Report—I consider the action of Mr. Thomas Watkins, the officer in question, to have been a very courageous one, and it affords me much pleasure to bring his name to the notice of the Board of Trade for its favourable consideration. I may add that the owners of the "Hughenden" have intimated to me their intention of marking their appreciation of his services in some suitable manner.

Upon the conclusion of the evidence, Mr. Burton, on behalf of the Board of Trade, submitted the following questions for my opinion:—

1. What was the cost of the vessel to her owners? What was her value when she last left the United Kingdom, and when she left Smyrna on the 6th December last? What insurances were effected upon and in connection with her?
2. When the vessel left Smyrna on the 6th of December last, was she loaded in accordance with the Board of Trade Regulations for the carriage of grain cargoes. If not, was she loaded in accordance with—
  - (a) The provisions of Schedule 18 of the Merchant Shipping Act, 1894? or
  - (b) The plan of loading approved by the Board of Trade on the 8th of November, 1900?
3. At the time that the vessel sailed from Smyrna—
  - (a) Was she in good and seaworthy condition as regards hull and equipments?
  - (b) Had she the required freeboard and was she in good trim for a voyage to Dublin?
4. What bunker coal was shipped on the vessel after she had left Smyrna? At what port or ports was it shipped, and when the vessel sailed from the last coaling port had she the required freeboard, and was she in good trim for a voyage to Dublin?
5. What is the cause of the loss of the vessel?
6. What are the circumstances in which all hands, except two, were drowned?

Mr. Middleton then addressed me on behalf of his clients, Mr. Burton replied, and I now return the following answers to the questions of the Board of Trade:—

1. The cost of the vessel to her owners, when new in 1900, was £45,300. When she last left the United Kingdom in June, 1909, the owners estimated her value at about £26,000; and when she left Smyrna they estimated that her market value was about £22,000 or £22,500, while she stood in the Company's books at £33,600.

The insurances effected upon and in connection with her were: hull and machinery, £28,000, at an annual premium of £5 10s. per cent.; freight, £2,650, its value being £2,640; and on premiums, £1,200, reducing £100 per month. There were no insurances on disbursements, and the owners took the risk of small damage.

2 When the vessel left Smyrna on the 6th December last. I am of opinion that she was not loaded in accordance with the Board of Trade Regulations for the carriage of grain cargoes.

Neither was she loaded in accordance with—

- (a) The provisions of Schedule 18 of the Merchant Shipping Act, 1894; nor
- (b) The plan of loading approved by the Board of Trade on the 8th of November, 1900.
3. At the time the vessel sailed from Smyrna :—
- (a) She was in good and seaworthy condition as regards hull and equipments.
- (b) She had the required freeboard and was in good trim for a voyage to Dublin.

4. 270 tons of bunker coal were shipped on the vessel after she had left Smyrna, namely, 50 tons at Bona and 220 tons at Algiers. When the vessel sailed from the last coaling port she had about three-quarters of an inch less than the required freeboard, but in other respects she was in good trim for a voyage to Dublin. At the time of her loss she would have had about four inches more than the required freeboard.

5. The causes of the loss of the vessel were :—That both the steam and hand steering-gear carried away during an abnormally heavy S.W. gale with a very high sea; that the ship, being unmanageable, fell off into the trough of the sea and rolled heavily; and that, in consequence of such rolling, her cargo of barley shifted, with the result that she attained a tremendous list to starboard and eventually capsized and foundered.

6. The circumstances in which all hands, except two, were drowned are, that when the ship capsized the boats in which the crew were seated on her bridge, waiting to be floated off when she went down, which boats it had been impossible to get out, also capsized, throwing their occupants into the water. The unfortunate men were provided with lifebelts, but they appear to have succumbed to the cold before they could be rescued by the "Devonshire."

Annexed is a list of those who lost their lives upon this sad occasion, with the relatives of whom I, and

those associated with me on this Inquiry, desire to express deep sympathy.

I have the honour to be,  
Sir,  
Your obedient Servant,  
W. F. CABORNE,  
Commander, R.N.R.,  
Inspector.

May 11th, 1912.

The Assistant Secretary,  
Marine Department,  
Board of Trade,  
Whitehall, S.W.

List of those persons who lost their lives through the capsizing and foundering of the steamship "Hughenden."

Name.	Age.	Rating.	Nationality.
J. Barkess ... ..	32	Master ...	British.
A. Noseworthy ... ..	36	1st Mate ...	Do.
J. Boardman ... ..	47	2nd Mate ...	Do.
L. Oldham ... ..	35	Steward ...	Do.
George Thewles... ..	45	Cook ...	Do.
C. Sandberg ... ..	42	Carpenter ...	Finnish.
W. Dixon ... ..	27	Boatswain ...	American.
J. McLaren ... ..	36	A.B. ...	British.
Leander Bjork ... ..	23	Sailor ...	Swedish.
Georges Fontaine ... ..	32	Do. ...	French.
T. Scheel ... ..	27	Do. ...	German.
W. Schmökel ... ..	31	Do. ...	Do.
R. Meynell ... ..	18	O.S. ...	British.
J. Stoddart ... ..	17	Do. ...	Do.
J. Piggford ... ..	43	1st Engineer ...	Do.
J. Little ... ..	32	2nd Do. ...	Do.
James Kay ... ..	24	3rd Do. ...	Do.
O. P. Malthouse ... ..	23	4th Do. ...	Do.
J. Nodin ... ..	35	Donkeyman ...	Do.
Albert Bird ... ..	28	Fireman ...	Do.
J. Shearing ... ..	43	Do. ...	Do.
P. Farmer ... ..	35	Do. ...	Do.
John Macauley ... ..	39	Do. ...	Do.
J. Lowes ... ..	25	Mess Room Steward.	Do.
A Mohamedan ... ..	25	Fireman & Trimmer.	British Indian(Aden.)