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No. 7896

## "USWORTH" (S.S.)

## THE MERCHANT SHIPPING ACT, 1894

## REPORT OF COURT

In the matter of a Formal Investigation held at the Institution of Civil Engineers, Great George Street, Westminster, on the 20th, 21st, 22nd and 23rd days of May, 1935, before the Rt. Hon. Henry Edward, Lord Merrivale, sitting as Wreck Commissioner, assisted by Commodore H. Stockwell, C.B., D.S.O., Captain Arthur Lyster Gordon, Mr. E. H. Mitchell, M.I.N.A., and Mr Edmund Wilson, M.I.N.A., into the circumstances attending the loss at sea of the s.s. "Usworth" on the 14th December, 1934.

The Court, having before it the Questions proposed by the Board of Trade, finds, upon the evidence given at the Investigation and for the reasons stated in this Report and in the Annex hereto, that the said Questions ought to be answered as follows:—

*Questions and Answers.*

1. Q. Who were the owners of the s.s. "Usworth"?

A. The Dalglish Steam Shipping Company, Ltd.

2. Q. What was the cost of the s.s. "Usworth" to her owners?

What was her value when she left Sydney, Nova Scotia?

What insurances were effected upon and in connection with the ship?

A. The vessel was bought by her owners in the year 1926 for the sum of £51,500.

No evidence was given as to her market value when she left Sydney, Nova Scotia, but at this time she was insured as follows:

(i) Hull and machinery for £46,250; the owners taking the first twenty per cent. of the risk;

(ii) 10 per cent. increased value on £46,250 against total loss only;

(iii) £1,200 premiums reducing. At midnight on the 10th December, 1934, the said insurances expired and at the time of her loss the vessel was insured for the following amounts, viz.:—

(i) Hull and machinery £27,800; (ii) 10 per cent. increased value on £27,800 against total loss only; (iii) £500 premiums reducing.

3. Q. What surveys of the s.s. "Usworth" had been made by Lloyd's Register between the 1st June, 1931, and the date when she left Sydney, Nova Scotia, on her last voyage?

A. The surveys made on the vessel by Lloyd's Register between the dates specified are evidenced by the following Reports, viz.:—

(i) Report No. 87234, dated June, 1931, regarding the Special Survey No. 1;

(ii) Report No. 18409, dated September, 1932, regarding Docking Survey;

(iii) Report No. 90326, dated July, 1933, regarding Docking Survey;

(iv) Report No. 5418, dated January, 1934, regarding Docking Survey;

(v) Report No. 101852, dated February, 1933, for the assignment of freeboards in accordance with the Merchant Shipping (Safety and Load Line Conventions) Act, 1932;

(vi) Report No. 20349, dated July, 1934, for the Annual Survey in accordance with the Merchant Shipping (Safety and Load Line Conventions) Act, 1932.

4. Q. What classification did Lloyd's Register assign to the vessel as a result of these surveys?

A. The s.s. "Usworth" was classified 100 A.1 as a result of the said surveys.

5. Q. When the s.s. "Usworth" left Sydney, Nova Scotia, on the 6th December, 1934,

(a) was she in good and seaworthy condition as regards hull and equipment?

(b) was she properly supplied with boats, life-saving appliances and distress signals?

A. When she left Sydney, Nova Scotia, on the 6th December, 1934,

(a) she was in good and seaworthy condition as defined in the before mentioned Reports;

(b) she was duly equipped in accordance with the requirements of the Board of Trade.

6. Q. With what steering gear was she fitted?

Was it in good and proper condition when she sailed from Sydney?

Was it, in its then condition, adequate for a transatlantic voyage in winter?

A. (a) She was fitted with a Lynn's horizontal steam steering engine placed at the after end of the engine room actuating the rudder by means of a chain and rod equipment working round blocks to the quadrant on the rudder head.

(b) Yes.

(c) Since she passed the required surveys nothing had happened to depreciate the condition of her steering gear.

7. Q. (a) With what kind of cargo was the vessel loaded?

(b) How much of the cargo was carried in each of her holds?

(c) Was any of the cargo carried on deck?

A. (a) The "Usworth" was loaded with wheat, about 5,625 tons; for the most part in bulk, but partly in bags;

(b) the cargo of wheat was fairly distributed in the five holds: No. 1 hold was two-thirds full of bulk wheat above which planks were placed with four tiers of bagged wheat above the planks, the upper tier reaching to about six feet from the top; No. 2, No. 3 and No. 4 were fully loaded with bulk grain; No. 5 was three-quarters full of bulk grain, with planks thereon, and four tiers of bagged wheat above;

(c) none of the cargo was carried on deck.

8. Q. (a) How was the cargo stowed in each of the holds?

(b) Was such stowage in accordance with the regulations governing the stowage of that type of cargo for the voyage in question?

A. (a) The cargo was stowed as before stated by adequate labour directed by the local stevedores and under the general supervision of the master and officers of the "Usworth".

(b) No suggestion was made during the Inquiry of any departure from the regulations specified, and the stowage appears to have been made in accordance therewith.

9. Q. Was the stowage of the cargo safe and proper?

A. The stowage was made in the usual way and with reasonable regard for safety.

10. Q. (a) Were the hatchways covered and adequately protected and secured?

(b) Were the hatch covers of adequate thickness?

(c) Were the tarpaulins, battening down appliances and hatch lashing ropes satisfactory, in good condition, and sufficient for their purpose?

A. (a) The hatchways of the holds were covered, protected and secured in the normal way for a vessel of the class of the "Usworth" in accordance, as appears to us, with the Rules contained in the Merchant Shipping (Safety and Load Line Conventions) Act, 1932, Schedule 2.

(b) The covers were of the prescribed character.

(c) The fittings mentioned were of sound quality and in good condition and such as normally would be sufficient for their purpose.

11. Q. What were

(a) the draughts fore and aft; and

(b) the freeboard of the vessel when she left Sydney, Nova Scotia?

A. The evidence is that

(a) the draughts fore and aft were respectively 21 feet 3 inches, and 21 feet 10 inches;

(b) the freeboard 4 feet 7 inches.

We see no reason to doubt its accuracy.

12. Q. (a) Were the draughts and freeboard in accordance with the Load Line Certificate granted to the vessel?

(b) Were the draughts and freeboard safe for the contemplated voyage?

A. (a) Yes.

(b) No exception was taken to them before us.

13. Q. When the vessel left Sydney, Nova Scotia, was she in proper trim and upright?

A. Yes.

14. Q. When the vessel left Sydney, Nova Scotia, was her loading such as to ensure safe stability?

A. The loading was believed by the master to be such as to ensure safe stability, and under normal conditions would no doubt have done so. In the event it did not.

15. Q. When the vessel left Sydney, Nova Scotia;

(a) Was she sufficiently manned for the voyage in question?

(b) Had she a sufficient complement of efficient deck hands?

A. (a) To answer this enquiry we assume the question of sufficiency to be governed by the regulations made under the Merchant Shipping Acts, and embodied in Board of Trade Circular 1463, whereby foreign-going steamships of the tonnage and dimensions of the s.s. "Usworth" should have, independently of the master and two mates, not less than eight efficient deck hands. She was officially deemed to have this complement.

(b) The evidence shows that the "Usworth" had on board her, master and two mates and 23 hands, of various ratings, comprising, in addition to the engine room staff, the wireless operator, the steward, ship's cook and mess-room boy, her boatswain, carpenter (shipped as "carpenter and sailor"), four "able seamen"—A.B.'s—and two apprentices. At her port of departure the eight last-mentioned were deemed by the port officials to satisfy the requirement of eight efficient deckhands.

16. Q. When did the vessel sail from Sydney, Nova Scotia?

A. She sailed from Sydney at about 11 p.m. on the 6th December, 1934.

17. Q. What were the conditions of

(a) the wind;

(b) the sea

when she sailed from Sydney?

A. The wind was westerly, strong, and the sea rough, after the "Usworth's" losing the shelter of the land.

18. Q. What were the weather conditions during the night of the 10th-11th December?

A. The weather worsened, the wind backed to the north west and its force progressively increased with correspondingly higher following seas. One effect was that the engines raced, and the engineers were put on double watches.

19. Q. Did the vessel ship any water during that night? If so, did it do any, and if so what, damage to the bridge house?

A. At about 3 a.m. a heavy sea stove in the port saloon door.

20. Q. Was the vessel hove to in order to permit the repair of the damage? If so, was this action seamanlike and proper?

A. The vessel was hove to for the repair of the damage. This action was seamanlike and proper.

21. Q. Did the steering gear carry away on the early morning of the 11th December, and if so, what parts of it carried away?

A. At about 4.30 a.m. the steering gear was found to be disabled; Warwick screws had broken, two lead blocks had been torn from the deck, the steering chain had become jammed and the casting supporting the drum had broken.

22. Q. If the steering gear did carry away

(a) Was it repaired and, if so, how?

(b) What happened to the vessel while the repair was being effected?

A. Wires were carried to the quadrant and to the bollard but gave way. Efforts were continuously made to rig up jury steering gear but such gear held for only a few minutes at a time, and in the intervals the vessel was in the trough of the sea. Later the rudder was lashed amidship.

23. Q. Was there on board a patent device for securing the rudder? If so

(a) What was its description?

(b) Was it used?

(c) Was it effective?

A. (a) There was on board for securing the rudder patent apparatus known as the Taylor Pallister brake.

(b) It was applied.

(c) By reason of the strain thrown on the rudder by the high seas the brake was not effective to control the rudder.

24. Q. Was the auxiliary steering gear resorted to, and if so of what did the auxiliary steering gear consist?

A. The auxiliary steering gear was resorted to. It consisted of a three-fold purchase of steel wire secured by eye bolts and worked by the winch and operated through a moving block near the quadrant and a standing block by the winch.

25. Q. If the auxiliary steering gear was resorted to, was it effective and, if so, for how long?

A. It was resorted to but was not effective.

26. Q. Was there any, and if so what, change in the weather at about 6 a.m. on the 11th December?

A. The weather became worse, with higher winds and seas.

27. Q. Did the "Usworth" send out any, and if so what, wireless messages at about this time?

A. Wireless messages were sent out stating the ship's position and calling for help.

28. Q. If so did any and which vessels reply to them?

A. Various vessels replied, including the Belgian s.s. "Jean Jadot" and the Cunard Company's s.s. "Ascania."

29. Q. Did any, and if so which, vessel come up to the "Usworth" on that morning?

A. The Belgian s.s. "Jean Jadot" came up at about 9 a.m.

30. Q. What were the weather conditions at that time? How was the "Usworth" then behaving? Was she shipping water?

A. The wind which had been of force 11 to 12 moderated somewhat. The "Usworth" was not shipping water.

31. Q. How were those in the "Usworth" occupied between the time when the vessel arrived and daybreak on the 12th December?

A. The "Jean Jadot" stood by, and those in the "Usworth" were specially occupied in efforts to make contact with the "Jean Jadot" by means of lines and to rig jury steering gear.

32. Q. At daybreak on the 12th December was a towing hawser rigged between the s.s. "Usworth" and the other vessel? To what part of each was it fixed? For what purpose was it fixed?

A. At daybreak on the 12th December a towing hawser belonging to the "Jean Jadot" was rigged between the "Usworth" and the "Jean Jadot." This towing hawser was made fast to the cable of the "Jean Jadot" and to the stern of the "Usworth" in order that the "Jean Jadot" might assist in the steering of the "Usworth," the intention being that the "Usworth" should proceed under her own steam to the Port of Fayal, with the help of the "Jean Jadot."

33. Q. Did the tow rope part at any time and if so when?

A. The tow rope parted at about 4.30 p.m. on the 12th December.

34. Q. Did the "Usworth" then send out any, and if so what, wireless messages?

A. She sent out such messages and, in particular, to the Port of Queenstown, County Cork, to secure the help of a salvage tug.

35. Q. Was there any, and if so what, change in the weather conditions on the evening of the 12th December?

A. The wind, which had for a time moderated somewhat, increased again to force 11.

36. Q. Were any, and if so what, further attempts made to rig a jury steering gear in the "Usworth" after the evening of the 12th December? If so, were they successful?

A. A jury steering gear was rigged and worked until the vessel was hove to on the 13th December.

37. Q. At what time did the "Usworth" get under way again? For how far did she proceed before her steering gear carried away again? At what time did it carry away?

A. She got under way late in the afternoon on the 12th December and was hove to at about 2 p.m. on the 13th December. In the meantime her steering gear gave way from time to time. She had then proceeded about 23 miles.

38. Q. What steps were then taken on board the "Usworth"?

A. The chain of her steering gear was repaired with a split link and, as the weather was getting much worse, the master secured the help of the "Jean Jadot," set his course for Queenstown, and signalled to that port for a tug. The weather became much worse and at 2 p.m. the master hove to on the starboard tack.

39. Q. What were the weather conditions during the afternoon of the 13th December? Did the vessel ship any water and suffer any damage during that afternoon? If she suffered damage was it promptly and efficiently repaired?

A. The wind was of hurricane force with seas sweeping over the ship. At about 1 p.m. a chain gave way and the "Usworth" fell into the trough of the sea. For safety of life the men were taken off the poop at 3.30 in the afternoon and the helm lashed to starboard. At about 5 p.m. a heavier sea displaced the covering of No. 2 hatch but the covering was re-secured.

40 & 41. Q. (40) Did the vessel meet with heavy weather at about 9.50 p.m. on the 13th December? If so, what was

(a) The direction and force of the wind?

(b) The direction and nature of the sea?

(c) How was the ship lying at the time?

(41) Did the sea break over the vessel at or about this time? If so, did the vessel, and in particular No. 2 hatch, suffer any, and if so what, material damage?

A. (40 & 41) At about 10 p.m. a succession of waves swept the ship; two of very great height and force appeared to affect the vessel's course, and a third, which was judged by the master to come on at 14 or 15 feet above the truck of the foremast, fell upon the ship and (in the master's words) "absolutely engulfed her." The vessel's cargo shifted so that she took a list which increased from about 12° to about 25°. Much structural damage was done; the engine room skylight was carried away, boats were broken from the davits and carried away, and one boat crashed into the engine room skylight and was stove in. At No. 2 hatch the

coamings were buckled, three hatch beams were forced down and fell on the grain, some covers were broken and some covers washed away. Bulkheads, the bridge front and the saloon front, were buckled. The port side of the bulkhead and the bridge front were stove in and in part torn from the deck. One of the derricks was broken; other derricks were displaced and hanging over the side on the deck. The starboard saloon door was stove in. The captain's quarters were as he says "practically demolished." The aerial was blown down and the wireless set put out of action. The master, officers and men did everything in their power towards restoring the trim of the ship and limiting the damage.

42. Q. If the hatchway of No. 2 hold was broken in, did any considerable quantity of water enter that hold

(a) at the time when the damage was done to the hatchway?

(b) afterwards?

A. Water entered No. 2 hold at the time the damage was done and increasingly afterwards.

43. Q. Did the cargo of the vessel shift at or about the above time?

A. The cargo manifestly shifted; the vessel took a heavy list.

44. Q. Was the vessel thrown over on her side and, if so, which side, and did she afterwards recover to some extent?

A. She listed to her port side and did not recover in any material degree.

45. Q. What was her list, if any, and in which direction?

A. Her list was to port: at first 12 degrees or thereabouts, but it increased during the night of the 13th December to (as was observed by the master) 25 degrees and by the early morning of the 14th the vessel appeared to the master to be likely to capsize.

46. Q. Was any and, if so, what damage done in the bridge space?

A. The bridge front on the port side was buckled.

47. Q. Did water enter the bridge space and, if so, did it flow thence down the bunker hatches?

A. Water entered the bridge space and flowed down through the after bunker hatch on the port side, and at about 5 a.m. on the 14th December reached the furnaces.

48. Q. What steps did the master of the "Usworth" take to repair the damage which had been done?

A. The damage was at this time irreparable.

49. Q. Did the master take any, and if any what, steps to attempt to get the ship into a more upright position?

A. He did what was practicable by efforts to shift cargo and by flooding the starboard engine room tank.

50. Q. Did the master take any, and, if so, what steps to prevent water from entering the lower parts of the ship?

A. No effective action for this purpose was practicable.

51. Q. Was the wireless aerial damaged at or about this time? If so, was the wireless operator able to send out any wireless messages thereafter?

A. As stated in answer to Questions 40 & 41 the wireless aerial was damaged, but after some delay the master took action by reason of which messages were again sent out.

52. Q. Were the pumps put on to any, and if so which, of the bilges as soon as was reasonably possible? If so, when did they start to work on the bilges? Were they efficient and, if so, for how long did they work efficiently?

A. The pumps were put on as soon as possible after the need arose and were worked as long as engine power was available.

53. Q. Did any, and if so what, vessels come up with the "Usworth" on the morning of the 14th December?

A. Yes, the s.s. "Jean Jadot" returned at about 3.30 a.m. after being blown off the scene, and the s.s. "Ascania" arrived at about 7 a.m.

54. Q. Did the list of the "Usworth" remain constant or did it increase during that morning?

A. It increased, as has been stated in Answer to Question 45.

55. Q. Were attempts made by the "Usworth" and the other vessels which came up to her to pass lines by means of rockets? If so, were the attempts successful?

A. Attempts were made by the "Jean Jadot" and the "Ascania" to pass lines to the "Usworth" by means of rockets. Such attempts were unsuccessful. The "Usworth" was unable to use her own rockets at this time owing to the fact that they had become wetted.

56. Q. During the morning of the 14th did any, and if so what, vessel launch a lifeboat fully manned and send it alongside the "Usworth"?

A. The "Jean Jadot" did so.

57. Q. Did any, and if so how many, of the crew of the "Usworth" jump into that lifeboat? Did the master of the "Usworth" throw an attaché case containing the ship's papers into that lifeboat?

A. Fourteen of the "Usworth's" crew jumped into the lifeboat. The master of the "Usworth" gave an attaché case containing the "Usworth's" papers to the steward, who threw it into the lifeboat.

58. Q. What happened to the lifeboat? Were any, and if so how many, of the crew of

(a) the "Usworth"

(b) the other vessel

drowned as a result of what happened to the lifeboat?

A. The lifeboat pulled away from the "Usworth" and attempted to lie to a sea-anchor but shortly afterwards got into the trough of the seas and capsized, and 12 of the crew of the "Usworth" and two of the crew of the "Jean Jadot" were drowned.

59. Q. On the afternoon of the 14th did another, and if so what, vessel launch a manned lifeboat and send it to the "Usworth"? Was the lifeboat able at first to get alongside the "Usworth"? If not, why not?

A. On the afternoon of the 14th December the Cunard Company's s.s. "Ascania" launched a manned lifeboat and sent it to the "Usworth." This lifeboat was not at first able to get alongside the "Usworth" owing to the fact that the "Usworth" had a serious list to port and the derricks of Nos. 2 and 5 holds were hanging over the ship's side.

60. Q. Did the officer in charge of the lifeboat make any, and if so what, suggestion as to the method in which the remaining members of the crew of the "Usworth" should get into the boat? Were any, and if so how many, lives lost in endeavouring to carry out that plan?

A. The officer suggested that the men on the "Usworth" should come overboard one at a time to be picked up by the crew of the lifeboat. Two of the hands jumped too hastily and in the struggle to save them they and another were drowned.

61. Q. Did the boat eventually manage to get alongside the "Usworth"? If so, how many lives were saved by that lifeboat?

A. The boat eventually managed to get alongside and the master and remaining members of the crew—nine lives in all—were saved.

62. Q. Did the master of the "Usworth" take all reasonable means to save

(a) the vessel;

(b) the lives of those on board her?

A. He did everything he could.

63. Q. Was the master of the "Usworth" justified in ordering her to be abandoned when he gave that order?

A. Yes.

64. Q. How many members of the crew of

(a) the s.s. "Usworth"

(b) the s.s. "Jean Jadot"

lost their lives as a result of this shipping casualty?

A. Fifteen members of the crew of the s.s. "Usworth" and two members of the crew of the s.s. "Jean Jadot."

65. Q. What was the cause of the loss of the s.s. "Usworth"?

A. She was overwhelmed by the sea and foundered in a hurricane.

66. Q. Were the abandonment and subsequent total loss of the s.s. "Usworth" caused or contributed to by wrongful act or default of her owners, the Dalgliesh Steam Shipping Company Ltd., or her master, Captain John Joseph Reed, or either, and, if so, which of them? And by what wrongful act or default, if any?

A. The owners complied with the statutory and administrative regulations. The master at all times did everything that was possible for him to do.

Dated this Eighteenth day of June, 1935.

MERRIVALE,  
Wreck Commissioner.

We concur in the above Report.

HENRY STOCKWELL  
ARTHUR LYSTER GORDON  
E. H. MITCHELL  
EDMUND WILSON

Assessors.

#### Annex to the Report.

The Solicitor-General (Sir Donald B. Somervell, O.B.E., K.C.), and Mr. G. St. Clair Pilcher (instructed by the Solicitor to the Board of Trade), appeared as Counsel for the Board of Trade. Mr. H. G. Willmer (instructed by Messrs. Lightbonds Jones and Bryan, Agents for Messrs. Ingledew and Company, of Newcastle) appeared as Counsel for the owners of the s.s. "Usworth." Mr. R. F. Hayward and Mr. Harold Griffin (instructed by Messrs. G. F. Hudson Matthews and Company), appeared as Counsel for the master of the s.s. "Usworth," the chief engineer, and the relatives of the chief officer and second engineer; and for the Officers (Merchant Navy) Federation, Ltd.; the Imperial Merchant Service Guild; the Mercantile Marine Service Association and the Marine Engineers' Association, Ltd. Mr. E. Aylmer Digby, K.C., and Mr. Vere J. U. Hunt (instructed by Messrs. Russell Jones & Company), appeared as Counsel for the National Union of Seamen. Mr. E. Aylmer Digby, K.C., and Mr. Vere J. U. Hunt (instructed by Messrs. Pattinson and Brewer), appeared as Counsel for the Transport and General Workers' Union.

The circumstances under which the casualty in question occurred are in great part detailed in the Answers made by the Court to the Questions of the Board of Trade. Some facts are added below.

The s.s. "Usworth" was built in 1926 at Sunderland. She was a steam screw cargo ship, single decked, two masted; schooner rigged; steel built; with six bulkheads, five holds, and eight water ballast tanks. Her length was 356.3 feet, main breadth 48.75 feet, depth in hold from tonnage deck to ceiling at midships 23.9. She had one set of engines, reciprocating tri-compound, direct acting, inverted; two cylindrical multitubular boilers of steel, loaded pressure 180 lbs. Her gross tonnage was 3534.82 and her registered tonnage 2189.40. She was classed 100 A.1 at Lloyd's.

On the 2nd December, 1934, the "Usworth" left Montreal for Queenstown fully laden in her five holds with a cargo of wheat weighing in all about 5,625 tons. On the 6th December she called at Sydney, Nova Scotia, to bunker and on proceeding encountered high winds and a rough sea, which continued; and on the 7th December cowlings were removed and plugged and the airpipes covered; on the 10th December the engines were racing, and double watches were thought necessary.

On the 11th December the weather definitely worsened; at 3 o'clock a.m. the port saloon door was stove in by a very heavy sea; necessitating that the vessel should be hove to for repairs; at 4.30 a.m.

the vessel being then about 1,000 miles from Newfoundland failed to answer her helm; her steering gear had become ineffective and the Taylor Palister brake fitted to the rudder failed to hold; signals for help were sent out by wireless and responded to by the Belgian steamship "Jean Jadot," and later by the Cunard Co.'s s.s. "Ascania." The "Jean Jadot," which arrived at about 9 o'clock, a.m., stood by continuously to render assistance except during a period in which she was driven off by winds of hurricane force. The "Usworth's" auxiliary steering gear was fitted but proved useless and continuous efforts made to fit jury steering gear had only occasional effect. While the "Jean Jadot" and the "Ascania" were at close quarters with the "Usworth" oil was pumped overboard from each with useful effect. Under the circumstances above set forth the "Jean Jadot" and the "Usworth" were connected by cable, and, with rudder lashed amidship, the "Usworth's" course at about 1.30 p.m. on the 12th December was set for the Port of Fayal in the Azores. Jury steering gear was rigged from the quadrant to the poop winch, and the vessels proceeded, the "Jean Jadot" astern of the "Usworth." The "Usworth" on the morning of the 13th December made about 23 miles between 9 o'clock and noon.

On the 13th December the wind increased in force; from time to time because of the condition of the jury steering gear the vessel was hove to. The wind rose for a time to force 12 with high confused seas breaking over the ship and causing damage.

At about 9.50 p.m. on the 13th December, three successive seas struck the "Usworth" of which two swept past, but the third fell upon her. The deck fittings were carried away; No. 2 hatch was stove in; the bridge front was stove in, the aerial blown away, the engine room skylight and ventilators carried away, various derricks carried away. During the night water came down to the stokehold through a bunker hatch in the bridge space.

On the morning of the 14th December the "Jean Jadot" and the "Ascania" were near at hand, but by reason of the high seas could not promptly render help. Meanwhile the stokehold plates were lifting because of water there and the water reached the furnaces and extinguished the fires. In the perilous conditions thus produced, with the vessel's list increasing and her bulwarks and decks under water, lifeboats from the "Jean Jadot" and the "Ascania" were gallantly brought into action, but in the process of escape from the sinking ship a large proportion of the crew lost their lives.

Oil of various kinds was pumped from the "Jean Jadot" and the "Ascania" with the object of moderating sea pressure in their immediate vicinity. Some was swallowed by men struggling in the waves and a heavier type oil swallowed by some of them caused illness which for a time disabled the men.

#### *Outstanding Questions.*

The matters which are the direct subject of this Investigation are dealt with in detail by Question and Answer in the Report.

Some outstanding questions of undoubted gravity which developed in the course of the Investigation call for further consideration. They are to some extent indicated in the Answers given to the 66 Questions formulated by the Board of Trade—Questions concerned immediately with the task of ascertaining whether those responsible for the construction, equipment, condition and manning of the "Usworth" should be found to have failed of compliance with the law as contained in the relevant statutes and regulations in force. Broader considerations as to safety of life at sea, and the well-being and efficiency of the mercantile marine, led to the presentment and discussion at the Investigation of additional matters.

#### *Design and Equipment of the "Usworth."*

As to the structure and equipment of the "Usworth" the outstanding topics were the type and the fitness and efficiency of her main steering

gear and the failure of her auxiliary steering gear to be of any service in the great emergency. The structure of the hatches, and whether they should have been of steel rather than wood, were subjects of argument:—so was the efficiency of the davits. A question was also raised at the hearing as to whether the "Usworth" was adequately fitted for towage. These latter matters we cannot usefully discuss.

#### *Structure and General Repair.*

The "Usworth" it was said by way of criticism was "a standard ship, built for sale"; and "in some particulars would crawl through the regulations." Her master, however, described her as "a fine sea-boat," and there can be no reasonable doubt that she was well-maintained, the repairs called for being always duly put in hand and carried out. What comes seriously into question and needs to be further considered is the type of steering gear with which she was fitted and, in this connection, the character of the auxiliary gear she carried.

#### *The Steering Gear.*

The rudder of the "Usworth" was operated by chain and rod steering gear worked from the engine room forward of the well deck. In the long stretch of chain and rod thus in use chain links snapped or worn by reason of working strain had constantly to be replaced, and incidentally this necessity threw much additional duty upon the ship's officers, and risks upon the crew. "Should a link fail in bad weather" the master said, "the men have to go down to the well deck to repair it at the risk of their lives." "Whether the chains are going to hold," he said, "is a continual worry." He expressed a strong opinion that "chain and rod steering gear ought to be abolished."

The master's main objection to such steering gear was its operating by the long stretch of chain and rod carried along the after deck up on to the poop and thence by the quarter blocks to the quadrant on the rudder post. On each side, it was said, there were six sharp bends unprotected. The steering gear itself was situated at the after end of the engine room and actuated from the bridge by controlling rods and bevel wheels and incidentally one of these rods crossing the main bunker hatch was fitted to be unshipped when cargo was discharging.

The master, it must be added, quite frankly said that the steering gear of the "Usworth" was of a type common for vessels of her class and perfectly good of its type. Moreover, it was shown that the actual failure of the gear was due not to any snapping of chain links, but to the giving way of a "Warwick screw" from some unexplained cause—the first time this master had known such a screw to fail. A question was raised upon the evidence of the ship's carpenter as to whether certain lead blocks which snapped, after the failure of the screw, had been tested with the rest of the ship's gear. On the whole we think they had.

Whether steering gear operated as was the main steering gear of the "Usworth" ought to remain an accepted type of gear for ocean-going vessels seems to us upon the evidence to call for full consideration with all possible help of expert witnesses. Steering gear of more modern type operating directly upon the rudder and fitted to secure effective control was described by various witnesses, and shown to be largely in use. Telemotor gear was also discussed and recommended by witnesses. Whether the regulations as to steering gear should be altered, is of course matter for consideration by those responsible, after complete investigation has been made. It must be said, though, that the loss of the "Usworth" was due to the failure of her steering gear and that the gear is of a kind which involves special risks.

#### *Auxiliary Steering Gear.*

The auxiliary or secondary steering gear of the "Usworth" consisted of tackle to be carried from the quadrant to the poop winch and described as a three-fold purchase 1½ inch wire designed to be

secured to an eyeblock on the quadrant and a standing block by the winch. To operate it, according to the master, required three men. It had been kept, since the "Usworth" was built, in the store-room underneath the quadrant and so far as the evidence showed was not tested before storage nor examined afterwards. As soon as it was got to work the eye bolt of one of the blocks split. The master was asked in cross-examination: "The auxiliary gear proved absolutely useless?" and he replied, "It did." Whether there ought to be regulations to ensure that efficient auxiliary steering gear shall be provided, and regularly tested, should in our opinion be promptly determined.

#### *Hand Steering Gear.*

The master of the "Usworth" and others expressed the view that hand-steering gear for use in case of emergency would be preferable to auxiliary gear such as the "Usworth" carried. There was expert evidence of a different effect, however, and the matter stands for full consideration whenever it becomes a specific issue which can be dealt with adequately.

#### *Sufficiency of the "Usworth's" Crew.*

Question 15, as to the sufficiency of the crew of the "Usworth"

(a) in respect of compliance with the regulations, and

(b) with regard to the work required in a vessel of the class in question on an ocean voyage when bad weather must sometimes inevitably be met

led to very serious debate at the Investigation.

The Answers given to the Board of Trade Questions in respect of this part of the case must be supplemented, since considerations arise which are of wider scope and involve safety of life and general well-being on board the vessels of the mercantile marine. Difficulties involved in rigging and working jury gear, and the extent to which the "Usworth's" crew could cope with them, are among these topics. It will be recognised that specific investigation, and the best evidence obtainable, will be needed before they can be dealt with conclusively.

#### *The Manning of the "Usworth".*

In answer to Question 15 we have stated that at the time when the "Usworth" cleared for her last voyage she was officially deemed to be sufficiently manned for the voyage, and to have a sufficient complement of deck hands, as specified in Board of Trade Circular 1463; that is to say: "independently of the master and two mates, not less than eight efficient deck hands."

As to the officers the "Usworth" carried, the unanimous opinion of my Assessors, in which I concur, is that with safety of life and well-being as dominant considerations the "Usworth" would have had besides her master, three mates. Before the ultimate trouble arose the watches necessarily required threw a too severe strain on the master and two mates. Moreover the design and equipment of the ship—at least as regards the steering gear—involved incessant attention to special tasks, sometimes quite small in themselves, all definitely increasing the burden of duty of the master and two mates. There was reasonable criticism, too, of the fact that with two mates there was no provision for specific instruction of the apprentices.

Counsel representing at the Investigation the interests of officers and men of the mercantile marine discussed, with a degree of stringency not wholly uncalled for by the circumstances of the case, the question whether the "Usworth" had in her the "eight efficient deck hands" when she left Sydney, Nova Scotia. The carpenter, Rourke, who was shipped as "carpenter and sailor", and the two apprentices, came under close consideration. Rourke was a witness at the Investigation and appears to have been a capable and useful member of the ship's company. The two apprentices were each in his nineteenth year at the time in question. One of them was called as a witness and was apparently quick, capable and eager to learn. Moreover, it must be remembered that the "Usworth" had lost one deck hand on her way to Sydney.

The master of the "Usworth" was conscious as it seemed of some difficulty in dealing with the question of "eight efficient deck hands"; but he had complied on the owners' behalf with regulations corresponding to those of the Board of Trade, and before the ship left Montreal the crew had duly appeared before the Mercantile Marine Superintendent, and they had been approved. So far as the "Usworth" was concerned there was no apparent margin for safety, but there was compliance with the law.

Whether the existing regulations do everything possible to secure that ocean steamers like the "Usworth" shall be sufficiently manned to face the varied perils of the sea, and whether any regulations could do this, at a practicable cost having regard to business conditions, are matters about which we are not able to express a confident opinion.

#### *Behaviour of the "Usworth's" Crew.*

It would not be proper that in a case of this kind we should fail to record the view we hold that from first to last in the course of events which led to the loss of the "Usworth" and many of her crew, the behaviour of the ship's company—officers and seamen—for a long time under circumstances of deadly peril, was in the highest degree praiseworthy. When the survivors were rescued, long continued labour without food and without sleep, had brought most of them to a state of exhaustion. They did all that was possible, to the end.

MERRIVALE,

*Wreck Commissioner.*

We concur,

HENRY STOCKWELL, ARTHUR LYSTER GORDON, E. H. MITCHELL, EDMUND WILSON,	} Assessors.
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During the reading of the above Report, Lord Merrivale said "one could not but be impressed by a sense of the degree to which the fellowship of the sea kept the masters and crews of those two vessels" (i.e. the "Jean Jadot" and "Ascania") "as near as might be at hand to render assistance to the 'Usworth' which was manifestly in a very dangerous position. They were not able to stand by because of the weather, but they both came back and they both rendered assistance. It would not be proper not to take note of it in an Inquiry of this kind."

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