

LOADING OF SELF-TRIMMERS

"SUDDEN AND OVERWHELMING LOSS"
OF THE RADYR.

HATCHES EXPOSED TO EXCEPTIONAL
STRAIN.

USE OF STEEL IN THE CONSTRUCTION OF
COVERS STRONGLY URGED.

In answering the questions submitted by the Board of Trade, the Court of Inquiry into the loss of the self-trimming steamer Radyr, of Cardiff, yesterday recommended that some provision should be made "to secure that coal in all incompletely filled holds of vessels of the self-trimmer class should be properly levelled." In the Court's opinion, the trimming of the Radyr's cargo "was not adequately and efficiently supervised."

The loss of the vessel is attributed to (1) the shifting of the cargo in Nos. 1 and 4 holds, causing a list, (2) the breaking in of the hatches, caused by the inferior quality and defective condition of some of the hatch covers, and (3) the large area of the hatchways, which, in the heavy weather experienced, exposed the hatches to exceptional strain. The disaster is characterised as sudden and overwhelming.

The Court, while suggesting that definite provisions and stipulations should be made in the specification for timber ordered for and used in the construction of hatch covers fitted in large and exposed hatchways, strongly urges that the use of steel in the construction of such covers be considered.

HATCHES BROKEN IN BY HEAVY SEAS DURING EXCEPTIONAL
WEATHER.



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JUDGMENT was given at the Cardiff Law Courts, yesterday, in the Board of Trade inquiry into the circumstances attending the loss of the Cardiff-owned steamer *Radyr*, off Hartland Point, with all hands, on the 7th December last. The vessel was owned by the Rupert Phillips Steamship Company. Judgment was delivered by Mr. W. Hugh Jones, K.C., Deputy Stipendiary, who was assisted by three nautical assessors, Captain F. J. Thompson, R.N.R., Mr. T. H. Blaker, and Captain R. W. Blacklin. Mr. Allen Pratt (Messrs. Vachell and Sons) appeared for the Board of Trade.

The Deputy Stipendiary Magistrate said the Court had considered the questions submitted by the Board of Trade, the answers to which were as follow:—

1. The *Radyr* was acquired by her owners under contract dated March 21, 1929, made between Messrs. Franklin, Thomas and Co., Ltd., Cardiff, as agents for the purchasers, and the Societe Anonyme des Armateurs Nantais, of Paris, the vendors, subject *inter alia* (a) to approval after inspection in dry dock in Bristol Channel; (b) to placing her in a graving dock for inspection at the bottom and at tail end shaft if required by purchasers; (c) to the vendors making good any damage found in the bottom or tail end shaft, and to payment of all expenses in connection therewith; (d) to expenses of drydocking and drawing and replacing tail end shaft being borne by the purchaser if no damage should be discovered to the bottom and or tail shaft; (e) to payment by the purchasers of all taxes or expenses in connection with her transfer to the British flag; and (f) to survey of boilers, due in 1929, being undergone at the expense of the vendor. The vessel was delivered to her owners, the Rupert Phillips Steamship Co., Ltd., on April 29, 1929, and on being transferred to the British Registry her name was changed from *Jura* to *Radyr*.

SELF-TRIMMER IN ALL HOLDS.

She was reconditioned between April 26 and May 2, 1929, under survey by Lloyd's and the Board of Trade. At this time 58 single and 14 double plank hatch covers were renewed, and 39 hatch covers were repaired. The new single plank hatch covers were constructed of 4th grade Archangel red pine wood, and the new double plank hatch covers of second grade Archangel white pine wood. The wood of all new covers was three inches in thickness.

2. The purchase price of the *Radyr* was £18,000, but with the costs of transfer and other charges the registered managing owner regarded the total cost as £19,525. According to the managing owner her value when she last left Cardiff was £22,000. The insurances were hull and machinery £18,000, freight £1,000, disbursements £1,600, premiums reducing £1,680. The actual value of premiums reducing at the time of the loss was £831 12s.

3. The *Radyr* was classed as a self-trimmer for all holds.

4. (a) There is no direct evidence showing by whom the plan of loading was decided and approved on the last voyage from Cardiff. According to the evidence of the coal foreman for the owners, he obtained from shippers the amount of coal for shipment and then informed the master as to the quantities to be loaded in each hold. The Court is of the opinion that the master approved of the plan of loading the vessel.

(b) There is no evidence that the master received instructions as to trimming the cargo loaded into the four holds.

5. (a) The amount and description of coal shipped was large and small coal totalling 2,799 tons, the vessel being also supplied with 143 tons 15 cwt. bunkers. It was estimated that the vessel also had about 23 tons bunkers surplus from the previous voyage; (b) cargo was stowed and trimmed in accordance with the customary practice at Cardiff. There is a diversity of opinion as to the customary practice in trimming of an incompletely filled hold. According to the evidence of Mr. J. T. Clatworthy, president of the Cardiff Coal-trimmers' Union, the National Coal Trimming tariff prescribed for self-trimmers requires that coal in hatches only should be levelled. He stated that the only service trimmers can be called upon to perform in connection with the levelling of coal is when the coal reaches the hatches and the coal has then to be levelled for the replacement of the hatch covers. He further stated there is no obligation to level the coal in an incompletely filled hold. He considered it the duty of the trimmers to direct a shute fore and aft and athwartships in the hatchway to make possible an even distribution of the cargo in the hold, so as to prevent the formation of a cone, and expressed the opinion that the building up of a cone in a hold would not be a workmanlike method of loading a ship.

LEVELLING THE CONE.

Mr. E. Street, chief supervisor of the Employers' Clearing House at Cardiff, stated that it had always been the custom to take off the top of a cone in an incompletely filled hold, although no provision was made therefor by tariff. Mr. Clatworthy, however, denied that such a custom existed, but that the trimmers might either take off the top of the cone to oblige an officer or take it off and insist upon payment therefor. Coal left in the form of a cone or coal not properly levelled in an incompletely filled hold may, through its tendency to shift in heavy weather, imperil the safety of the vessel. The Court, therefore, recommends that some provision be made to secure that coal in all incompletely filled holds of vessels of the self-trimmer class should be properly levelled.

6. (a) When the *Radyr* left Cardiff on 6th December, 1929, she was in a good and seaworthy condition as regards the hull, and was also in good condition as regards equipment, except as hereinafter mentioned.

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

(c) Hatchways were covered in accordance with the Board of Trade requirements, but having regard to the hatches being stove in, they were not adequately protected and secured.

(d) Tarpaulins, battening down appliances, and hatch lashing wires were satisfactory and in good condition.

(e) Adequate provision was made for the supervision of the loading and trimming of the cargo. It was the duty of the coal foreman for the owners to superintend the loading of the vessel, but he did not appear to regard

it as his duty to exercise any supervision over the stowage and trimming of the cargo. The outdoor foreman for the shippers had the duty of seeing that the coal was shipped in a proper manner, but he appeared to have been mainly concerned with the arrangements for the mixing of the coal. It was the duty of the assistant supervisor of the Employers' Clearing House to see that the loading was carried out to the satisfaction of the master or officer. On the third night of the *Radyr's* loading, when Nos. 1 and 4 holds were completed, he did not go on board, but inspected those holds while standing at the extreme edge of the cradle of the tip and when about twenty feet above the deck. This, in the opinion of the Court, does not constitute an inspection of a hold. Three supervisors supervised the trimming on behalf of the Coaltrimmers' Union. It does not appear

that No. 3 hold was inspected. The supervisor on duty when Nos. 1 and 4 holds were completed was on the quay, but did not go on board to inspect the work done by the trimmers. The Court considers where supervisors are provided, the existence of such a provision should not be regarded by the supervisors as relieving them of the responsibility of exercising proper and efficient supervision, and thereby imposing on the master or officer in charge the necessity of making complaints as to the character of loading. It appears to the Court that the inspection of holds upon completion of loading is most essential. Hence, although adequate provision was made for the supervision of the trimming of the cargo, the Court considers that the trimming of the cargo was not adequately and efficiently supervised.

(f) The cargo shipped in Nos. 2 and 3 holds was properly and efficiently trimmed. There is a conflict of evidence as to the trimming of No. 4 hold. Mr. Powell, a leading trimmer, when asked in Court why the cone was not trimmed replied, "if she pays a tariff we make her seaworthy and go down to the wings." The Court does not consider that the whole of the coal in hold No. 4 was loaded in the centre in the shape of a cone, but is of the opinion that about 224 tons were first loaded in the forward end of the hold against the bulkhead, with the coal sloping towards the after end, and that the shute was later shifted to the after part of the hatchway, when about 90 tons were loaded in the shape of a cone over the slope made by the coal in the forward end. Whether part of the coal was trimmed in the shape of a cone or even in the manner described by Mr. Davies, the assistant supervisor for the Employers' Clearing House, neither method of trimming was proper nor workmanlike. Further, in loading No. 4 hold the coal was so tipped as to cause a list to port. Thence the Court found that the cargo shipped in No. 4 hold was not properly and efficiently trimmed.

NOT UNSEAWORTHY.

The list to port shows that coal in No. 4 hold had been loaded to the port side, and the error was improperly corrected by the trimming of coal to the starboard side of the No. 1 hold. Hence the Court is of the opinion that the cargo in No. 1 hold was not properly and efficiently trimmed, whilst the loading of Nos. 1 and 4 holds would tend to cause a list in the event of the vessel meeting heavy weather. Yet the Court considers that such loading was not of itself sufficient to regard her as being in an unsafe or unseaworthy condition. It was, however, a source of danger, in that it was calculated to cause her hatchways in heavy weather to be more exposed to the impact of seas.

7. After leaving Cardiff on the morning of the 6th December the *Radyr* was sighted several times from the Headcliffe, but there is no evidence that she was sighted from any other vessel.

8. At 7 48 a.m. on the 7th December, a wireless S.O.S. message was sent out by the *Radyr* and received at Fishguard wireless station. The message was, "Off Hartland Point; require immediate assistance; hatches stove in." According to the log of that station a message was sent at 7 49 a.m., "Do you want lifeboat or boat to stand by?" At 7 50, the reply received from the *Radyr* at the station was, "Require anything; near sinking; trying launch lifeboat." This was the last message received at the station from the *Radyr*.

9. The weather reports were given as recorded in the evidence. Immediate action was taken at Fishguard wireless station on receipt of the message from the *Radyr* at 7 48 a.m., and every effort appears to have been made to get into contact with steamers in the vicinity of Hartland Point, and messages were continually transmitted and received relating to the *Radyr* until about 10 51 a.m. There is no evidence of any reply having been received from any vessel until 8 23 a.m. No signals of distress were seen from the Headcliffe. There is no evidence to show that the vessel was seen from the shore. The lifeboats from Clovelly and Appledore were not launched. The district inspector of the Royal National Lifeboat Insti-

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tution expressed the opinion that owing to the severity of the gale and the direction of the wind, the Clovelly lifeboat could not be launched, nor could the Appledore lifeboat cross the Bideford Bar. No message was received at the Padstow lifeboat station until 11.45 a.m. The lifeboat was immediately launched and proceeded to Hartland Point, where, in the opinion of the coxswain of the lifeboat, no ship's lifeboat could have lived in such weather and sea. Hence, in the circumstances which prevailed, the Court considers that it was not possible for assistance to reach the vessel in time to be of any good.

10. The Court recited the evidence of the body of the wireless operator being found.

HATCH COVERS EXAMINED.

11. The Court is of opinion that the lifebuoy marked "S.S. Jura," and a number of hatch covers, parts of hatch covers, and other wreckage washed ashore at or near Marshland Mouth and Welcombe Mouth, Devon, Coast, on or about the 8th December, belonged to the Radyr.

(b) According to the evidence of the witnesses who saved the wreckage, about 108 hatch covers were found.

12. Mr. Steele, of the Board of Trade, made a most thorough examination of the 64 hatch covers and seven parts of hatch covers which he inspected. While it is recognised that some of the covers may have been interchanged on particular hatches, the Court considers that the evidence is sufficient to determine the general position which the hatch covers or parts of hatch covers examined by Mr. Steele occupied on board the ship, and accepts his opinion as to their respective positions. The Court is satisfied from its examination, and from the evidence of Mr. Steele, that those seven hatch covers had been stove in whilst they were in position on the hatches, and that the immediate cause of their being stove in was the force of the heavy seas breaking on the hatches.

(c) It is considered by the Court that the fractures in the parts of the broken hatch covers produced were all caused or contributed to by the lack of strength of the timber, and also with regard to exhibits "L," "N," "K" (part), and "X" by defects in the timber.

(d) The Court is of the opinion that the parts of broken hatch covers produced were from old hatch covers of inferior quality with the exception of exhibit "K," which was from a new cover of inferior quality.

13. (a) Having regard to the wireless message received, and in the absence of any other evidence, the Court considers the Radyr foundered and was lost shortly after 7.30 a.m. on the 7th December, 1929, off Hartland Point.

(b) The cause of the loss of the vessel and all hands on board was due to the large influx of water into two or more of the holds owing to the force of the heavy seas breaking in the hatches during weather of exceptional violence.

In the absence of direct evidence, the Court cannot express a definite opinion, but it is probable (1) that the cargo in Nos. 1 and 4 holds shifted during the heavy weather and thus caused a list which rendered the vessel more vulnerable to the impact of the seas; (2) that the breaking in of the hatches was caused by the inferior quality and defective condition of some of the hatch covers; and (3) that in the heavy weather experienced the large area of the hatchways in proportion to the area of the deck constituted a serious danger and exposed the whole of the hatches to exceptional strain. All the circumstances tend to show that the disaster to the Radyr, with the most regrettable loss of the lives of all those on board, was sudden and overwhelming.

14. The Court is of the opinion that definite provisions and stipulations should be made in the specification for timber ordered for and used in the construction of hatch covers fitted in large and exposed hatchways on sea-going vessels, and recommends that where covers are made of wood, they should be of high-grade straight-grained timber free from knots, shakes and sap. It is, however, strongly urged that the question of the use of steel in the

construction of such covers should be considered. If such a recommendation be adopted, it does not appear to be necessary to take precautions in the selection of such timber used for the purpose of hatch covers, but it is necessary and desirable that all hatch covers should, after being made and before being coated and painted, be subject to the approval of a Board of Trade surveyor. It is further recommended that there should be more frequent periodical surveys of the hatch covers of such vessels.

In conclusion, the Deputy Stipendiary Magistrate said, "There is one more melancholy duty, and that is to express the very deep and heartfelt sympathy of the Court with the relatives of those unfortunate men who lost their lives in this sad disaster. We ought not to close the inquiry without also expressing our grateful thanks for the assistance we have received from those who have presented the case to us so very excellently."

Mr. Allen Pratt associated himself with the expression of sympathy, and thanked the Deputy Stipendiary for his reference to the conduct of the case.

THE QUESTIONS.

The questions which were submitted by the Board of Trade were as follow:—

1. When, and in what circumstances, was the Radyr acquired by her owners? Was she afterwards re-conditioned under survey by Lloyd's and the Board of Trade? What number of hatch covers were renewed at this time; of what description and quality and thickness of wood were the new covers which were fitted constructed?

2. What was the cost of the Radyr to her owners? What was her value when she last left Cardiff? What insurances were effected upon, and in connection with, the ship?

3. Was the Radyr classed for trimming purposes as a "self-trimmer" for all or any, and, if so, which of her four holds?

4. When the Radyr loaded cargo for her last voyage from Cardiff in December, 1929, (a) by whom was the plan of loading decided and approved? (b) Had the master any instructions as to the trimming of the cargo loaded into the four holds of the ship?

5. What amount and description of coal was shipped in each of the holds on the last voyage? Was the cargo stowed and trimmed in accordance with the existing customary practice at Cardiff in the stowage and trimming of coliers classed as self-trimmers?

6. When the Radyr left Cardiff on the 6th December, 1929, (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? (c) Were the hatchways covered and adequately protected and secured? (d) Were the tarpaulins, battening down appliances and hatch lashing wires satisfactory, in good condition and sufficient for their purpose? (e) Was the trimming of the coal adequately and sufficiently supervised, and was the cargo shipped in each of the holds of the vessel properly and safely trimmed? (f) Was the vessel in proper trim, and had she freeboard required for a winter voyage? (g) Was the Radyr so loaded as to ensure safe stability? (h) Was the vessel so loaded as to be in a safe and seaworthy condition?

7. After leaving Cardiff on the morning of the 6th December, 1929, was the Radyr sighted at any time or times by any other vessel? If so, when and in what position or positions was she sighted? When, where, and from what vessel was she last sighted, and what was her condition at that time?

8. Was a wireless message sent out by the Radyr about 7.49 a.m. on the 7th December, 1929, and received on shore to the effect that she was off Hartland, that her hatches had been stove in, and that she required immediate assistance?

9. In the circumstances which prevailed was it possible for assistance to reach the vessel in time to be of any good?

10. Were bodies of any members of the crew of the Radyr recovered? If so, when and where were they found?

11. Did the lifebuoys marked Jura, and a number of hatch covers, parts of hatch covers, and other wreckage washed ashore and found at or near Marshland Mouth and Welcombe Mouth, Devon Coast, on or about the 8th December, 1929, belong to the Radyr? If so, how many complete hatch covers or portions of hatch covers were found, and what was the thickness of the timber of which they were composed? In what condition were they when found?

12. Did the hatch covers or parts of hatch covers afford sufficient evidence to determine—(a) the position they occupied on board the ship? (b) Whether any and, if so, which of them had been stove in, and what the immediate cause of their being stove in? (c) Whether the fractures in the broken hatch covers or portions of hatch covers had been caused or contributed to by defects in or lack of strength of the timber? (d) Of what descriptions of timber the hatch covers and broken hatch covers were made, and whether the latter were old or new hatch covers?

13. When and where was the Radyr lost? What was the cause of the loss of the vessel and all hands on board her?

14. In the opinion of the Court, should definite provisions and stipulations be made in the specifications for timber ordered for and used in the construction of hatch covers fitted in large and exposed hatchways on sea-going vessels? If so, what definite provisions and stipulations are desirable or necessary? What, if any, precautions are necessary or desirable in the selection of such timber used for this purpose?

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