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Secretary to the
Ministry of Transport



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THE MERCHANT SHIPPING ACT, 1894

REPORT OF COURT

(No. 7954)

s.s. "Willodale" O.N. 129053

In the matter of a Formal Investigation held at The Law Courts, London, on the 20th, 21st, 22nd, 23rd and 24th days of September, 1948, before J. V. Naisby, Esq., K.C., assisted by Captain J. P. Thomson, Commander D. V. Sutton, R.D., R.N.R., and H. A. Lyndsay, Esq., M.I.N.A., into the circumstances attending the foundering of the s.s. "Willodale", in the Bay of Biscay on the 4th April, 1947, with the loss of 12 lives.

The Court, having carefully inquired into the circumstances attending the above-mentioned shipping casualty, finds, for the reasons stated in the Annex hereto, that the loss of the "Willodale", and those on board of her, was caused by a combination of circumstances:—

- (i) an insufficient margin of stability;
- (ii) bad weather;
- (iii) the tearing of the tarpaulins by the deck cargo either when it shifted or when the lashings were cut away in order that the cargo could be jettisoned; and the admission of water to the cargo space forward of amidships; and
- (iv) an error of judgment on the part of the master in failing to appreciate the unstable condition of the vessel.

Dated this 5th day of October, 1948.

J. V. Naisby, *Judge*.

I concur in the above Report,

H. A. Lyndsay, *Assessor*

We concur in the above Report except that, in our opinion, a further contributing factor to the cause of the loss, was the failure properly to secure the deck cargo.

J. P. Thomson }
D. V. Sutton } *Assessors*

QUESTIONS AND ANSWERS

The Court's answers to the questions submitted by the Ministry of Transport are as follows:—

- Q. 1. By whom was the s.s. "Willodale" owned, and for how long was she so owned?
- A. Bromage Shipping Company, Limited, Cardiff. Since 1929.
- Q. 2. By whom was the s.s. "Willodale" built, and when was she built?
- A. Robert Thompson & Son, Limited, Southwick Yard, Sunderland. 1909.

Q. 3. With what compasses was the s.s. "Willodale" supplied, and where were they placed on board?

A. Two magnetic compasses.
One standard on top of wheelhouse.
One steering in wheelhouse.

Q. 4. Was the s.s. "Willodale" fitted with a wireless transmitter maintained in working order?

A. Yes.

Q. 5. With what charts and publications was the s.s. "Willodale" supplied?

A. Sufficient for the voyage.

Q. 6. On what voyage was the s.s. "Willodale" lost?

A. From Bordeaux to Cardiff.

Q. 7. When did the s.s. "Willodale" leave Bordeaux on her last voyage?

A. 2nd April, 1947.

Q. 8. What were the draughts of water on leaving Bordeaux on the last voyage?

A. The best evidence as to draught was that of the Harbour Master, who stated that the draughts were 18 feet 0 inches forward and 18 feet 3 inches aft in fresh water.

Q. 9. Was the s.s. "Willodale" seaworthy and properly equipped to meet the perils of the voyage undertaken when she left Bordeaux?

A. The hull and equipment of the ship were satisfactory, but see Annex to the Report.

Q. 10. Was the s.s. "Willodale" equipped with life saving appliances in accordance with the regulations on her last voyage?

A. Yes.

Q. 11. What was the nature and weight of cargo carried on the last voyage, and was some of that cargo carried on deck?

A. Pitwood, about 2,175 tons (English). Yes.

Q. 12. Was the s.s. "Willodale" overloaded?

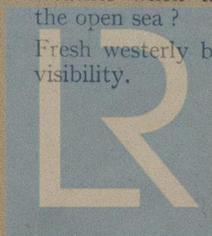
A. The vessel had more than the minimum prescribed freeboard.

Q. 13. Was the cargo properly and safely stowed?

A. See Annex to the Report.

Q. 14. What was the nature of the wind, sea and weather when the s.s. "Willodale" reached the open sea?

A. Fresh westerly breeze, some swell, and good visibility.



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Q. 15. Did the weather, wind and sea conditions deteriorate?

A. Yes.

Q. 16. Was some of the deck cargo released by cutting lashings?

A. Yes.

Q. 17. Was some of the deck cargo washed overboard by heavy seas, and was damage thereby occasioned to the structure of the ship?

A. Yes.

Q. 18. When and where was the s.s. "Willodale" lost?

A. Shortly after 5.20 a.m. on the 4th April, 1947, about 13 miles to the south and west of Pointe de Chassiron.

Q. 19. What was the complete crew of the s.s. "Willodale", and how many members of the crew lost their lives in the casualty?

A. 22 and 12.

Q. 20. What was the cause of the loss of the s.s. "Willodale"?

A. The cause of the loss was a combination of circumstances:

(i) an insufficient margin of stability;

(ii) bad weather;

(iii) the tearing of the tarpaulins by the deck cargo, either when it shifted, or when the lashings were cut away in order that the cargo could be jettisoned; and the admission of water to the cargo space forward of amidships; and

(iv) an error of judgment on the part of the master in continuing on the voyage after he had the indications provided by the changes of list on the 2nd April.

The nautical assessors are also of opinion that the failure properly to secure the deck cargo was also a contributing factor.

Q. 21. Was the loss of the s.s. "Willodale" caused or contributed to by the wrongful act or default of her owners, her master or ship's officers?

A. No; but the master was guilty of an error of judgment in continuing on the voyage after the vessel had twice changed her list appreciably without any apparent reason therefor. The nautical assessors are also of opinion that the master was in fault in failing properly to secure the deck cargo.

ANNEX TO THE REPORT

1. At this Inquiry Mr. Peter Bucknill (instructed by the Treasury Solicitor, Ministry of Transport Branch), appeared for the Minister of Transport; Mr. Meurig Evans (instructed by Messrs. Vaughan & Roche), appeared for the Owners of the "Willodale"; Mr. P. F. Broadhead (Messrs. Ingledew Brown Bennison & Garrett), appeared for the Mercantile Marine Service Association and the Navigators' and Engineer Officers' Union, and Mr. Neil Maclean (Messrs. Neil Maclean and Co.), appeared for the National Union of Seamen.

2. The steamship "Willodale" was a single-screw, single-deck vessel built of steel in 1909 at Sunderland. She was owned by Bromage Shipping Company, Limited, of Cardiff. The vessel had reciprocating machinery amidships and two Scotch boilers. She had one hold forward of the machinery space and one hold aft. She had four hatches and each hold was subdivided into two compartments by a non-watertight wooden bulkhead. Two watertight doors were fitted in the watertight bulkhead at the fore end of the stokehold, one on each side. Her gross tonnage was 1777, her length between perpendiculars 268 feet, her breadth moulded 38 feet 4 inches. The depth

moulded to the upper deck was 19 feet 8 inches. Aft of the machinery space she had a raised quarter deck. She had four double bottom tanks, two under the forward hold, one under the machinery space, and one under the after hold, in addition to fore and after peak tanks. The double bottom tank under the machinery space was used for feed water and had a watertight subdivision at the centre line. The vessel had a forecastle, bridge and a poop, all seven feet in height. The vessel had steel bulwarks 48 inches in height extending from the forecastle to the bridge and from the bridge to the poop. There were freeing ports in the bulwarks. The hatch coamings were of steel, the covers were of wood, and the battening down was by the usual arrangement of tarpaulins, battens and wedges. There were small side hatchways on the main deck, and short hatchways abreast the casing, which served the bridge space and the bunkers at the sides of the machinery space.

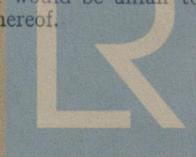
The coamings were 9 inches in height and the hatchways were closed by wooden covers and the usual arrangement of tarpaulins, battens and wedges. The total internal cargo capacity of the ship amounted to about 130,000 cubic feet. The vessel had one triple expansion reciprocating steam engine and two single-ended Scotch boilers which were built in 1909 at Stockton-on-Tees. The speed of the "Willodale" was stated to be 9½ knots. The boiler pressure was 180 lbs. per square inch. The "Willodale" was built under Lloyds Register of Shipping, and at the time of her loss she carried that Society's highest class +100 A.1. The Loadline Certificate was renewed in 1941, to expire April, 1945. This certificate was extended in 1945 and in 1946 after annual general examinations. In 1946 the certificate was extended to the 31st July, 1947. The assigned freeboards were: Tropical 1 foot 9½ inches; Summer 2 feet 0½ inch; Winter 2 feet 3½ inches; Winter North Atlantic 2 feet 6½ inches. The freeboards were measured from the top of the upper deck stringer plate at side. At the time of her loss the vessel was on a summer voyage, and the draught corresponding to the summer loadline was 17 feet 10 inches. The vessel carried the statutory life-saving appliances, including a Class 1A lifeboat on each side under radial davits housed on top of the bridge deck side houses, and each lifeboat was capable of carrying more than the whole crew of the vessel. The starboard lifeboat was fitted with a motor. The vessel carried sufficient life-jackets for her crew. The ship was fitted with wireless telegraphy, which was in working order throughout.

3. After a ballast voyage from Newport, Mon., the vessel loaded a cargo of pitwood at Bordeaux at the end of March and beginning of April, 1947, and sailed from Bordeaux about 5 p.m. on the 2nd April. The cargo was stowed in the holds and on the deck. The total quantity was about 2,175 English tons, of which nearly 600 tons were carried on deck. The vessel loaded in an enclosed dock at Bordeaux, but it seems probable that at the later stages of her loading the vessel was not wholly waterborne. The best evidence of her draught was that of the Harbour Master which was given by affidavit. He stated that the draughts on leaving were 18 feet forward and 18 feet 3 inches aft in fresh water, giving a mean draught of 18 feet 1½ inches, corresponding to a salt water draught of 17 feet 8½ inches. The vessel started with a list to port variously estimated at from 3 to 10 degrees, but the Court feels that the initial list was nearer the lower rather than the higher of these estimates. After leaving Bordeaux the vessel proceeded down the river in charge of a pilot, and anchored for the night abreast of Le Verdon. On the 3rd April the vessel proceeded in charge of a sea pilot, who was dropped at buoy BXA, off the mouth of the River Gironde, about 5.20 p.m. During the passage down the river on the 2nd April the port list changed to a starboard list and then changed again to port, and about 3 p.m. on the 3rd April the list

again changed to starboard. The master sent for the second engineer and inquired whether any pumping of tanks had taken place, clearly for the purpose of ascertaining whether this was the reason for the change in list. No such pumping had taken place. When the sea pilot was dropped the wind was a fresh westerly breeze with some swell and the visibility was good. The wind and sea, however, increased and the list to starboard also increased rapidly, probably at least partly due to the increasing wind on her port bow. The list appears to have continued to increase, and about 8.45 p.m. on the 3rd April, the cargo on No. 2 hatch shifted a little to starboard, thereby still further increasing the list. In an endeavour to reduce the list some cargo was jettisoned by hand, but the quantity jettisoned was not considerable. The list continued to increase and as the position appeared to become alarming the lashings on No. 2 hatch were cut, about 9.15 p.m. Most of the deck cargo on No. 2 hatch then went overboard, carrying with it the starboard bulwarks abreast of that hatch. The immediate consequence was a temporary decrease in the starboard list. Either when the deck cargo shifted originally or when it was jettisoned after the lashings were cut, the tarpaulins on No. 2 hatch were torn. There was some displacement of the hatch covers and the master, with some assistance, in order to minimise the inflow of water into the hold, nailed pieces of board to the remaining hatch covers and ordered the pumping of No. 2 bilge. The attempt to check the inflow of water did not prove effective, and, as further water was gaining access to the hold, the master decided to alter the course to bring the weather astern, and to make for La Pallice. At 9.49 p.m. an S.O.S. message requesting assistance was despatched; this was acknowledged, the Master being informed that a French pilot cutter was on its way to his assistance. After a period on an easterly course it was found that there was difficulty in steering; seas were washing over the after deck, and the cargo on the after deck was moving. By this time the wind had reached a force of 9 or 10, and the master decided to heave to and await the arrival of assistance. During this period, probably due to the increasing difficulty of stoking, the boiler pressure had dropped from the normal working pressure of the ship of 165 lbs. to 110, 120 lbs. The "Willodale" was in wireless communication with the French pilot boat, and about the time of her expected arrival rockets were sent up to disclose her position. At some time which cannot be clearly defined the deck cargo on the remaining hatches was also released or washed overboard. About 4.30 a.m. on the 4th April the pilot boat arrived in the vicinity, and the master apparently decided to try to make for La Pallice, escorted by the French pilot boat. Repeated attempts, however, proved that it was impossible to turn the vessel on to an easterly course, and about 5.15 a.m., by which time a large quantity of water had entered the vessel and she had a very heavy list, the water began to enter the stokehold through the watertight doors between the stokehold and the forward hold. Very shortly afterwards the port watertight door gave way, and water in considerable quantity entered the stokehold. The order was given to stop the engines and abandon ship, and an attempt was made to get the starboard lifeboat ready for lowering. Some difficulty was experienced owing to the list of the ship, but the boat was carried overboard by a heavy sea and, before anything further could be done, the vessel sank by the head. Prior to the order to abandon ship the crew had all been issued with life-jackets of the Victory type. In consequence of the casualty twelve lives were lost, including those of the master, the chief officer and the chief engineer; the survivors were rescued by the French pilot boat under very difficult conditions and in accordance with the best traditions of the sea.

4. The vessel was owned by Bromage Shipping Company, Limited, and was managed by Messrs. Charles M. Willie & Company (Shipping) Limited, the Directors of which Company were Messrs. E. R. James, N. Humphreys and C. E. Heath, Mr. Humphreys being the registered manager of the vessel. She had been in the ownership of the Bromage Shipping Company, Limited, since 1929, and the management had always been in the hands of Messrs. Willie. From 1940 to 1946 the "Willodale" had been under requisition, and during the war Mr. Humphreys had been absent from his business on Government service. The active management of the vessel was done by Mr. C. E. Heath, who accepted full responsibility for her management. The "Willodale" was, at any rate at the time of her loss, the only ship owned by the owners, and her superintendence was in the hands of T. A. Reed, Limited, of Cardiff Docks. The Directors of T. A. Reed Limited were Mr. T. H. Bullen and Mr. T. G. Bullen. For practical purposes the superintendence of the vessel was in the hands of Mr. T. G. Bullen. The vessel had undergone a special survey in 1936, and during the war years had been subjected to the general annual examination in accordance with the usual practice. For some years prior to her loss her owners had spent substantial sums in upkeep, and in 1944 and in 1946 she underwent extensive repair.

5. In 1944 stability tests were carried out by the Ministry of Transport, the results of which were obtained by the owners from the Ministry in 1946, and evidence has been given that this information was passed to the master. This experiment did not deal with the effect of a deck cargo, and it was apparently assumed that the master was competent to deduce therefrom the stability of the vessel under other conditions of loading. No permanent guidance was issued to the master by owners or superintendents. The information available to the superintendents was insufficient to enable sufficiently reliable calculations to be made. They, however, were making calculations and endeavouring to obtain data as to stability based upon a voyage from Hamburg to London with a cargo of deals, battens and boards in December, 1946. There was some evidence that Mr. T. G. Bullen had a conversation with the master and the chief officer, in the course of which he passed on to them some information resulting from his calculations. Exactly how much information he gave them is a matter of doubt. The Court is satisfied that, with the deck cargo with which the vessel was in fact loaded, she had an insufficient margin of stability to meet the perils reasonably to be anticipated on the voyage. The opinion we have formed as to the stability of the vessel is in our view confirmed by the changes of list referred to above, and it would appear that the master himself was suspicious as to her stability on the afternoon of the 3rd April. It seems to the Court that the changes of list on the 2nd April should have given an indication of her dangerous condition. This was the first occasion on which the vessel had recently carried a deck cargo on a Summer voyage, and the evidence established that the cargo stowed on deck on the last voyage was appreciably higher than on any previous post-war voyage. In our opinion it would have been better if the master had been provided with information upon which to base a reliable estimate of the stability of the vessel when loaded with a deck cargo, or upon which to estimate the height of deck cargo he could carry with a reasonable margin of safety, but after consideration, we feel that helpful as the provision of such information would have been, we are unable to say that the failure on the part of the owners to provide this information was in the circumstances blameworthy. Having regard to the doubt as to what information as to stability was supplied to the master, the Court feels that it would be unfair to blame him for the initial lack thereof.



6. The cargo consisted of pitwood in the form of barked timber in 9 feet, 6½ feet, and 4½ feet lengths, which were stowed throughout the ship generally in a fore and aft direction. The evidence established that the cargo was stowed in the usual manner for ships loading at Bordeaux. To retain the deck cargo in position uprights were placed against the bulwarks, and were held in position by the placing of cargo between them and the hatch coamings. After the cargo was loaded the method which was adopted for securing it in position was as follows: On each side of each hatch two bights of wire, the ends of which were attached to the bulwark stanchions, were carried inboard over the top of the deck cargo and lashed transversely and diagonally. The uprights were not lashed or fastened to the bulwarks, as it was considered that the keying effect of the pitwood cargo between the hatch coaming and the bulwark rendered this unnecessary. It was stated that in accepting this arrangement there was a slight departure from the practice adopted on the first voyage. There had been two intermediate voyages on which the uprights had not been lashed. The Court has given grave and anxious consideration to the question as to whether the method of securing the deck cargo was in accordance with the regulations and was proper. The regulations are laid down in Statutory Rules and Orders No. 110 of 1932 and provide:—

“ 8. *Lashings*.—A complete system of overall lashings of ample strength and in good condition, fitted with releasing arrangements, shall be provided so as to give effective security throughout the length of the timber deck cargo. The releasing arrangements shall be accessible at all times. All fittings required for securing lashings shall be of strength corresponding to the strength of the lashings.

“ 9. *Uprights*.—When uprights are required by the nature of the timber,

- (a) the uprights shall be of adequate strength and may be of wood or metal;
- (b) the spacing shall be suitable for the length and character of timber carried, but shall not exceed 10 feet; and
- (c) efficient means shall be provided for securing the uprights.”

The members of the Court were unable to agree as to the answer to this question.

7. The two Assessors with nautical experience feel that the deck cargo was insufficiently secured. The evidence given at the Inquiry was to the effect that the method of securing the cargo adopted in this case was normal in this trade, and such expert evidence as was directed to the question made no criticism of the method adopted other than the fact that it was

suggested that the portion of the cargo stowed at the foot of the uprights should be lashed as an independent unit. No suggestion of blame on the master or officers of the “Willodale” in the method of securing the deck cargo was made by any party at the Inquiry, and, so far as the other Assessor and I are concerned, much as we feel bound to consider seriously any opinion from the nautical assessors, and great as we appreciate the weight of their opinion is, we cannot feel that it would be proper for us to condemn the master or officers of the vessel in this case for the method adopted in securing the cargo. In expressing this opinion we agree that it was not the best possible method, but we cannot find that it was negligent or in breach of the regulations.

8. All the members of the Court are agreed that the following factors contributed to the loss of the “Willodale”:

- (i) an initial insufficient margin of stability;
- (ii) bad weather;
- (iii) the tearing of the tarpaulins by the deck cargo either when it shifted or when the lashings were cut away in order that the cargo could be jettisoned; and the admission of water to the cargo space forward of amidships; and
- (iv) an error of judgment on the part of the master in failing to appreciate the unstable condition of the vessel.

The nautical assessors are also of opinion that the failure properly to secure the deck cargo was also a contributing factor.

9. The evidence established that no lifeboat drill had recently been carried out on board the “Willodale” and, whilst there was no suggestion that the failure to carry out lifeboat drill was responsible for any loss of life in this instance, the Court feels that the importance of this statutory requirement cannot be too strongly impressed upon owners, managers and masters.

J. V. Naisby, *Judge*.
H. A. Lyndsay, *Assessor*

We concur in the above Report with the exception of paragraph 7. In our opinion the deck cargo was not properly secured inasmuch as only four bights of wire were provided on each side of the forward and after decks. The attachments of these wires to the bulwark stays must have been approximately 20 feet apart. The lengths of the pitwood were 4½ feet, 6½ feet, and 9 feet, and even if the 9 feet lengths were selected for the outer tiers the wires could not adequately secure the cargo. Efficient means for securing the uprights were not adopted.

J. P. Thomson } *Assessors*
D. V. Sutton }

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in London, in November, 1948)

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