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## S. S. "JOHN HARRISON"

Board of Trade inquiry commenced at Middlesbrough, May 12<sup>th</sup> 1925, into the loss of the S.S. "John Harrison" whilst on a voyage from the Tyne to Amsterdam with a cargo of coal.

President :- Mr M. P. Griffith-Jones, Stipendiary  
Magistrate

Assessors :- Capt. P. W. Tait of Keith

Capt. Owen Jones of Amblethorpe Port

Mr F. H. Alexander of Newcastle.

Mr J. Burton representing Board of Trade.

Mr Corbyn

"

Furness Shipbuilding Co.

Mr Muir

"

H. Harrison Shipping Co.

### Summary of first days evidence.

Mr Burton (Board of Trade) briefly summarised the case as follows:-

The vessel loaded in Howden docks, Tyne with Cramington washed small coals. She left the dock at 1-10 a.m. on Dec<sup>r</sup> 25<sup>th</sup> 1924 and tied up at the Black Jetty Burys being short of 2 firemen. The vessel sailed 15 mins. after midnight of the 26<sup>th</sup> under a pilot to Tyne Piers.

The pilot left at 0-45 the weather being fair. From that time nothing has been seen or heard of the vessel or her crew. On January 10<sup>th</sup> 1925 a lifeboat in good condition and a lifebelt were washed up on the Isle of Amrum bearing the name "John Harrison". This island is well north of Heligoland.

The principal features in the design of the vessel are that she had a Raised Quarter Deck extending to the fore side of the <sup>navigating</sup> bridge and in the well the



No 1 hatch was trunked and connected to the forecabin. There were 3 washports in the forward well whose sills were 18 in. above the deck.

The vessel was of the type known as "self-trimmers" and was practically down to her marks. She was not inclined for stability but a sister ship the "Martinhoe" was inclined and in the loaded condition had a GM of 2.49 ft.

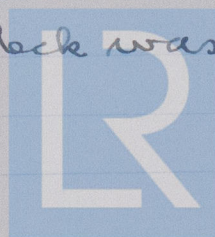
The vessel had made 5 loaded voyages.

A former boatswain will give evidence, also a donkeyman and a fireman who did not sail on the last voyage.

When the vessel left there was a quantity of ashes below which might have interfered with the raising of steam but were possibly removed when the vessel got to sea.

The depositions of eight other masters of vessels leaving North-East ports on the same day - the earliest 16 hours after the "John Hamson" - show that a heavy gale from the S.W. was raging, and two of the vessels took shelter in the Humber.

The statement of the master of the "Vale of Pickering" a similar ship, would show that on Jan 2<sup>nd</sup> 1925 at 9.30 a.m. he encountered very heavy weather 65 miles W by S of Beadby Head. At that time he was hoove to, and received heavy seas over the bow which smashed the after end of No 1 hatch and set back the cabin bulkhead at the after end of No 2 hatch. The vessel shipped a quantity of water, but eventually reached shelter under the lee of Dungeness and from thence proceeded to Dover for temporary repairs. The crew's quarters amidships were flooded out and the deck was awash when the vessel took shelter.



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Witness:- W. W. F. Butterwick,

Naval Architect, Furness Shipbuilding Co.

Witness stated vessel was built under Lloyd's Survey to class 100 A1 to that Society's Rules for 1923/4. She was handed over, after trial, on 17<sup>th</sup> October 1924.

He handed in plans of the vessel and Lloyd's Freeboard Certificate.

The deadweight at 16'-6½" draught in saltwater was 2,570 tons. The freeboard to the R. Q. D. was 5'-6".

The details of the scantlings of the hull including the sheers were then read over.

Witness put in a plan showing the excess buoyancy possessed by the vessel above that required by the Board of Trade.

The forecastle was fitted with tonnage openings the sills of which were 18 in above the deck. These were closed by shifting boards further reinforced on the outside by a .30 in steel plate bolted against the bulkhead so that the forecastle front bulkhead was practically continuous.

The trunked hatch in the well was 5'-1" high against a normal height of 24 in.

The cargo spaces were ventilated by 6-15 in ventilators with 36" x 36 coamings.

All ventilators were supplied with wood plugs and canvas covers, while wood plugs were provided for goose necks and sounding pipes.

No shifting boards were provided in the holds and there was no provision for the same.

The bulwark in the forward well was 50" high. The washports were 3'-6" x 1'-6" in forward well.



In addition 2 small scuppers and a pipe scupper were fitted each side.

The total water capacity of the forward well is 64 tons.

The hatch covers of No. 1 hatch were of 3 in white wood 9'-9" long. The covers were formed by bolting together two 9" planks.

Two tarpaulins were provided for each hatch, one of Kax-proofed, and the other of Hemp-tarred. No Jute was used.

The cleats were formed of  $3 \times 2\frac{1}{2} \times 40$  L<sup>bs</sup> 24 in apart and were placed facing one way and the other alternately. In addition No. 1 hatch was fitted with 6 x 3 in channel locking bars hinged at the centre and fastened at the ends with 1 in diameter butterfly hook bolts to the Bulk Angle. The edges of the channel were chamfered to prevent the cutting of the tarpaulins. One such bar was fitted for each tier of hatch covers.

Nos 2, 3, and 4 hatches were fastened by 2" S. W. Rope.

The steering gear was of the normal type the quadrant being increased 50 per cent in lieu of a tiller.

In addition to the requirements of Lloyd's Rules an auxiliary block and tackle steering arrangement was fitted.

The details of pumps and suction, as per plans approved, were then confirmed.

No deck pumps were fitted.

The angle of repose of the coal was taken at  $35^\circ$  in calculating the metacentric height of 2.49 feet.

The time which would be taken to free the forward well of water when same was level with the bottom of the freeing ports would be 1 min 22 sec<sup>1</sup>.

The actual area of freeing ports was 11 per cent in lieu of the rule requirement of 10 per cent in the well, and 5.9 in lieu of 5% on the R. Q. P.



Same witness examined by Owner's Solicitor

The quality of the tarpaulins is not ordinarily dealt with by Lloyds Registered - No.

But the Owner is asked for the best possible? - Yes.

If the ship struck a wreck in way of the wells where she has only a single bottom the result might be serious? - Yes.

Same witness examined by Mr Alexander (Assessor)

The Duplex pump had a capacity of 110 tons per hour

The two bridge pumps " " " " 16 " " "

Assuming No. 1 hold flooded and the wooden partition to hold the resulting draughts would be  $24\frac{1}{2}$ " fore and  $11\frac{1}{2}$ " aft.

Same witness examined by Captain Tait (Assessor)

The foreboard given was to the Raised Quarter Deck (5' 6"). What would it be at the after end of the well?

Approximately  $13\frac{1}{2}$  in.

Is there anything to prevent water going down goose-necks? - Wood plugs were provided.

No shifting boards were fitted although this cargo is as apt to shift as grain? - No.

May not shifting boards be placed in way of the clear spaces in the holds? - I have never known such a thing done.

It is the fashion to do away with pillars and fit a centre-line bulkhead. Could not this be done in a collier? - It is done in part in this case.

Have you known shifting boards in bunkers? - No.

The rules do not call for them but they are necessary in certain cases.

Have you ever known ship's hatches to be blown off when the ship pants? - No.

Well it happens through building elastic ships. It never troubled us when ships were of iron and steel in the old-fashioned way.



You say manual pumps are not now required by hybrids?  
 - That is so.

Yes. They did not take my advice when I said "Stick to the pumps."

It so happens that the last Board of Trade inquiry I was at also concerned a ship built on the Miller system - as this one is. Has it occurred to you that there is anything wrong where the two systems dovetail together? - No

Is there any saving in weight? - Not in a ship of this size.

The patentee is a friend of mine and I have no desire to say anything unkind.

Note

The above concluded the evidence in chief of Mr. Butterworth, but he is to be called later in connection with evidence concerning the "Vale of Pickering".

Witness Mr. Harold Harrison - Managing Owner  
 Vessel was delivered on 16<sup>th</sup> October 1924 and cost £31,290.

Were any repairs effected between delivery and loss? - Practically nil.

What do you estimate the ship's value when she left the Tyne? - £32,500.

What Insurances were on the ship? -

Hull and Machinery	£26,000.
Outfit	£2,600
Freight	£3,900.
Premium reducing	£1,134
Total	£33,634.

Particulars were then produced of the vessel's previous voyages:-



1<sup>st</sup> voyage. Blythe to Bayonne.  
Hours on voyage  $14\frac{1}{4}$ . Voyage 900 nautical miles.  
Cargo 2,103 tons Coal, 149 tons bunkers.  
Draught  $15'7''$  f.  $15'2''$  aft.

2<sup>nd</sup> voyage. Swansea - Delft.  
Hours on voyage  $54\frac{1}{4}$ . Voyage 392 nautical miles.  
Cargo 2,392 tons Coal. 105 tons Bunkers.  
Draught  $16'3''$  f.  $16'5''$  aft.

3<sup>rd</sup> voyage. Tyne - Caen.  
Hours on voyage 59. Voyage 425 nautical miles.  
Cargo 2,367 tons Coal 103 tons bunkers.  
Draught  $16'2\frac{1}{2}''$  f.  $16'5''$  aft.

4<sup>th</sup> voyage. Inmingham to Amsterdam.  
Hours on voyage  $31\frac{3}{4}$ . Voyage 200 nautical miles.  
Cargo 2,385 tons Coal 101 tons bunkers.  
Draught  $16'5''$  f.  $16'4''$  aft.

5<sup>th</sup> voyage. Inmingham to Amsterdam.  
Hours on voyage  $52\frac{3}{4}$ . Voyage 200 nautical miles.  
Cargo 2,375 tons Coal. 82 tons bunkers.  
Draught  $16'6''$  f.  $16'0''$  aft.

Last voyage.  
Cargo 2,298 Coal.  
Bunkers. 89 tons.  
 $15'10''$  draught w per fuel stage bill.

apparently on 3<sup>rd</sup> and 5<sup>th</sup> voyages vessel was slightly down by the head.

Letters from the Master. Extracts:-

"Arrived at Bayonne after a rough passage.  
Average 7.2 knots on 13 tons of coal. Steamer shipped heavy water fore & aft. Before sailing the ship was full and 12 in above her marks. Ship loaded 5 in by the head. This happens with a light cargo."  
"Rough passage from Bayonne (to Brest?) N.E."



winds and strong sea. Vessel has not got sufficient power to steam against this weather. On arrival had 14 tons bunkers aboard. Draught forward 4'-10" aft 11'-6". Very light for this time of year."

"With slight head wind and sea the ship at once decreases her headway. Best speed in fine weather 8 knots."

"Inmureham to Amsterdam, passage favourable. 9.3 knots on 11 tons."

"Inmureham to Amsterdam. 6.7 knots. fresh head winds."

Mr Hamson stated that the vessel had a crew of 17 all told, and she was on charter.

1<sup>st</sup> Day concluded.

Inquiry is anticipated to last until Friday.

S. B.



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