

STEEL IRON SHIP

Received at London, 12 AUGUST 1894

No. 3594 Survey held at Belfast Date, First Survey July 19th 89 Last Survey August 9th 1889
On the Crew Steamer Lancashire

TONNAGE under Tonnage Deck } 2687.91
Ditto of Third, Spar, or Awning Deck } 1112.65
Ditto of Poop, or Raised Qr. Dk. } 3806.56
Ditto of Houses on Deck } 40.02
Ditto of Forecastle } 16.20
Gross Tonnage } 3870.70
Less Crew Space } 124.77
Less Engine Room } 1230.65
Register Tonnage as out on Beam } 2504.36

ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AWNING-DECKED VESSEL.

Half Breadth (moulded) ... 22.5
Depth from upper part of Keel to top of Upper Deck Beams ... 32.
Girth of Half Midship Frame (as per Rule) ... 50.
1st Number ... 104.5
1st Number, if a 3-Decked Vessel deduct 7 feet ... 97.5
Length ... 398.16
2nd Number ... 3220.
Proportions—Breadths to Length ... 2.8
Depths to Length—Upper Deck to Keel ... 12.4
Main Deck ditto ... 16.39

Master B. R. W. Williams 89-89
Built at Belfast
When built 1889 Launched April 24th
By whom built Harland & Wolff Ltd.
Owners Pilby Bros. & Co.
Residence Liverpool
Port belonging to Liverpool
Destined Voyage Bombay via Cardiff
If Surveyed while Building, Afloat, or in Dry Dock. Specially Surveyed while Building.

LENGTH	Feet.	Inches.	BREADTH	Feet.	Inches.	DEPTH	Feet.	Inches.	Power of Engines	Horse.	No. of Decks with flat laid	No. of Tiers of Beams
on deck as per Rule	398.16		Moulded	45		top of Floors to Upper Deck Beams	28.33		500		Two	Three
Do. do. Main Deck Beams							20.50					
Dimensions of Ship per Register, length, 400.7 breadth, 45.2 depth, 28.1 Depth moulded 31.4 1/2												
KEEL, depth and thickness	Side bars 9 1/2 x 1 1/2											
STEM, moulding and thickness	9 1/2 x 3 3/4											
STERN-POST for Rudder do. do.	11 1/2 x 4 1/2											
" " for Propeller	11 x 1 1/2											
Distance of Frames from moulding edge to moulding edge, all fore and aft	24											
FRAMES, Angle <u>Steel</u> for 1/2 length amidships	5 1/2	3 1/2	9	5 1/2	3 1/2	9	5 1/2	3 1/2	9	5 1/2	3 1/2	9
Do. for 1/4 at each end	5 1/2	3 1/2	9	5 1/2	3 1/2	9	5 1/2	3 1/2	9	5 1/2	3 1/2	9
REVERSED FRAMES, Angle <u>Steel</u>	4	3 1/2	8	4	3 1/2	8	4	3 1/2	8	4	3 1/2	8
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	4 1/2	3 1/2	8	4 1/2	3 1/2	8	4 1/2	3 1/2	8	4 1/2	3 1/2	8
" thickness at the ends of vessel	4 1/2	3 1/2	8	4 1/2	3 1/2	8	4 1/2	3 1/2	8	4 1/2	3 1/2	8
" depth at 3/4 the half-bdth. as per Rule	4 1/2	3 1/2	8	4 1/2	3 1/2	8	4 1/2	3 1/2	8	4 1/2	3 1/2	8
" height extended at the Bilges	4 1/2	3 1/2	8	4 1/2	3 1/2	8	4 1/2	3 1/2	8	4 1/2	3 1/2	8
BEAMS, Upper, Spar, or Awning Deck	10	7	9	10	7	9	10	7	9	10	7	9
Single or double Angle Iron, Plate or Tee Bulb	10	7	9	10	7	9	10	7	9	10	7	9
Single or double Angle Iron on Upper edge	10	7	9	10	7	9	10	7	9	10	7	9
Average space	40			40			40			40		
BEAMS, Main, or Middle Deck	11	8	10	11	8	10	11	8	10	11	8	10
Single or double Angle Iron, Plate or Tee Bulb	11	8	10	11	8	10	11	8	10	11	8	10
Single or double Angle Iron on Upper Edge	11	8	10	11	8	10	11	8	10	11	8	10
Average space	40			40			40			40		
BEAMS, Lower Deck	11	8	10	11	8	10	11	8	10	11	8	10
Single or double Angle Iron, Plate or Tee Bulb	11	8	10	11	8	10	11	8	10	11	8	10
Single or double Angle Iron on Upper Edge	11	8	10	11	8	10	11	8	10	11	8	10
Average space	40			40			40			40		
BEAMS, Hold, or Orlop	30	4	10	30	4	10	30	4	10	30	4	10
Single or double Angle Iron, Plate or Tee Bulb	30	4	10	30	4	10	30	4	10	30	4	10
Single or double Angle Iron on Upper Edge	30	4	10	30	4	10	30	4	10	30	4	10
Average space	20			20			20			20		
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	5 1/2	11	10	5 1/2	11	10	5 1/2	11	10	5 1/2	11	10
Rider Plate	5 1/2	11	10	5 1/2	11	10	5 1/2	11	10	5 1/2	11	10
Bulb Plate to Intercoastal Keelson	5 1/2	11	10	5 1/2	11	10	5 1/2	11	10	5 1/2	11	10
Angle Irons	4	4	9	4	4	9	4	4	9	4	4	9
Double Angle Iron Side Keelson	4	4	9	4	4	9	4	4	9	4	4	9
Side Intercoastal Plate	4	4	9	4	4	9	4	4	9	4	4	9
do. Angle Irons	3 1/2	3 1/2	8	3 1/2	3 1/2	8	3 1/2	3 1/2	8	3 1/2	3 1/2	8
Attached to outside plating with angle	3 1/2	3 1/2	8	3 1/2	3 1/2	8	3 1/2	3 1/2	8	3 1/2	3 1/2	8
BILGE Angle Irons to Margin plate	4	4	10	4	4	10	4	4	10	4	4	10
do. Bulb Iron	4	4	10	4	4	10	4	4	10	4	4	10
do. Intercoastal plates riveted to plating for entire length	4	4	10	4	4	10	4	4	10	4	4	10
BILGE STRINGER Angle Irons	6 1/2	4 1/2	10	6 1/2	4 1/2	10	6 1/2	4 1/2	10	6 1/2	4 1/2	10
Intercoastal plates riveted to plating for 3/4 length	6 1/2	4 1/2	10	6 1/2	4 1/2	10	6 1/2	4 1/2	10	6 1/2	4 1/2	10
SIDE STRINGER Angle Irons	6 1/2	4 1/2	10	6 1/2	4 1/2	10	6 1/2	4 1/2	10	6 1/2	4 1/2	10

The FRAMES extend in one length from Margin plate to Margin plate and thence to gunwale on margin plate and thence to gunwale on margin plate.

The REVERSED ANGLE IRONS on floors and frames extend from middle line to Margin plate and thence to gunwale on margin plate and thence to gunwale on margin plate.

Every frame for half length, and to main and upper decks alternately at ends. All to lip of bulkhead.

KEELSONS. Are the various lengths of Plates and Angles properly connected? Yes And butts properly shifted? Yes

PLATING. Garboard, double riveted to Keel, with rivets 1 1/4 in. diameter, averaging 4 3/4 ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clench, double riveted; with rivets 1 in. diameter, averaging 4 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked clench, double riveted; with rivets 1 in. diameter, averaging 4 3/4 ins. from centre to centre.

Butts of all Strakes at Bilge for lapped and double riveted and throughout the strake in way of Margin plate, which is fitted with lapped and double riveted and throughout the strake in way of Margin plate, which is fitted with lapped and double riveted.

Edges from Bilge to Main Sheerstrake, worked clench, double riveted; with rivets 1 in. diameter, averaging 4 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked clench, double riveted; with rivets 1 in. diameter, averaging 4 ins. from cr. to cr.

Edges of Main Sheerstrake, double riveted. Upper Sheerstrake, double or single riveted.

Butts of Main Sheerstrake, treble riveted for entire length amidships. Butts of Upper or Spar Sheerstrake, treble riveted for entire length amidships.

Butts of Main Stringer Plate, treble riveted for entire length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for entire length amidships.

Breadth of laps of plating in double riveting 6 1/4 Breadth of laps of plating in single riveting 6 1/4

At Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted double No. of Breasthooks, 4 Crutches, 3 deep floor

What description of Steel is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c. Siemens Martin Steel

Manufacturer's name or trade mark, Harland & Wolff Ltd. Steel Co. of England and Steel Co. of Scotland

The above is a correct description.

Builder's Signature, Harland & Wolff Ltd. Surveyor's Signature, James Curpin

Surveyor to Lloyd's Register of British and Foreign Shipping.

Workmanship. Are the butts of plating planed or otherwise fitted? *Mostly lapped, planed where fitted.*
Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? *yes.*
Are the fillings between the ribs and plates solid single pieces? *yes.*
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *yes*
Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? *yes*
Do any rivets break into or through the seams or butts of the plating? *very few.*

Masts, Bowsprit, Yards, &c., are *all* in *good* condition, and sufficient in size and length. If of Iron or Steel give Scantlings of Plating, Angle Irons, &c., and further explain by a Sketch showing how the lower Masts and Bowsprit are constructed, showing the number of Plates and Angle Irons, mode of riveting, quality of Materials, and if stamped with Maker's name.

State also Length and Diameter of Lower Masts and Bowsprit *Rigged with four pole masts as Auxiliary to steam power.*

Fore and Main Masts *120.32 120 x 20 diam. 3 plates in the round 13 1/2 x 32, and 3 angles 4 x 3 x 7/16*
Mizen Mast *93.0 x 24 - 3 - - - 10 1/2 x 32 - 3 - - 4 x 3 x 7/16*
Jigger - *90.6 x 22 - 3 - - - 10 1/2 x 32 - 3 - - 3 1/2 x 3 x 7/16*

As previously approved: All plates tested at the steel works, and masts doubled at port and starboard at keels.

NUMBER & LETTER for EQUIPMENT		Test per Certificate	Inches per Rule	Machine where Tested and Superintendent, also Number of Certificate.	ANCHORS.	Nº.	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested and Superintendent, also Number of Certificate.
SAILS.					Bower					
Chain		149.2 2 3/16	120 1/2	300 x 2 3/16	Anchors		1	43.0.22 38.1.1.0	43	Mar. 16. 1889
Fore Sails,		150.4 2 3/16	120 1/2	90 x 1 1/4	Stream		1	43.0.10 38.1.1.0	43	Mar. 16. 1889
Fore Top Sails,		90 4 3/4	47 1/2	4 3/4 S.W.	Anchor		1	43.0.14 37.19.1.14	43	Apr. 18. 1889
Fore Topmast Stay Sails,		120 4 3/4	120	120 x 1 1/4	Kedge		1	37.0.16 33.18.3.0	36 1/2	Mar. 12. 1889
Main Sails,		90 3 1/2	26	4 3/4 S.W.	2nd Kedge.		1	37.0.22 33.18.3.0	36 1/2	Mar. 12. 1889
Main Top Sails, and		90 12	Manila	90 x 12	Total		1	14.0.22 15.16.3.14	14	Mar. 12. 1889
Hawser		90 10		90 x 10	Total		1	3.2.20	3	Mar. 12. 1889
Warp		90 4			Kedge		1	7.1.11 9.11.2.7	7	Mar. 12. 1889
quality		5 x 7 1/2	6		2nd Kedge.		1	3.1.16 5.18.3.0	3 1/2	Mar. 12. 1889

Standing and Running Rigging *White Hemp* sufficient in size and good in quality. She has *two* Life Boats and *two* other boats.

The Windlass is *Patent Steam & Ford* Capstan *good* and Rudder *good* Pumps *good*

Engine Room Skylights. How constructed? *of plates and angles on cunnings 39 ins above bridge deck.* How secured in ordinary weather? *with screw bolts & nuts.*

What arrangements for deadlights in bad weather? *Solid top with bulls eyes.*

Coal Bunker Openings. How constructed? *plates & angles* How are lids secured? *with hatch bars* Height above deck? *40 above Br. 11 under*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *5 freeing ports, 3 scuppers & 2 mowing pipes forward; 1 freeing port, 3 scuppers 2 mowing pipes, and open railings in way of a hatch - aft each side.*

Cargo Hatchways. How formed? *of plates and angles* State size *Main Hatch (No 2) 23.6 x 16.0 Fore hatch No 1 13.6 x 12.0 No 3 Quarter hatch No 4 11.6 x 13.0 No 5 15.6 x 11.0*

If of extraordinary size, state how framed and secured? *1 ship beam & 1 7.12.0 in No 1, 5.26; 2 web plates & 3 fore & aft in No 2, 1 web plate & 1 7.12.0 in No 3; and 1 7.12.0 in No 4.*

What arrangement for shifting beams? *1 web plate & 1 7.12.0 in No 3; and 1 7.12.0 in No 4.*

Hatches, If strong and efficient? *yes 3 inches solid*

Order for Special Survey No. <i>226</i>	1st. On the several parts of the frame, when in place, and before the plating was wrought	<i>July 19, Aug. 3, 13, 21, work suspended, Oct. 11, 17, 23, 30; Nov. 4, 15, 23, 29. Dec. 4, 12, 17, 31, 1888; Jan. 16, 25; Feb. 4, 13, 22, 25; Mar. 5, 11, 15, 20, 23, 27</i>
Date <i>April 21. 1889</i>	2nd. On the plating during the process of riveting	<i>April 1, 12, 20, 26, 27; May 6, 13, 23, 28; June 5, 10, 24; July 2, 9, 18, 19, 26; Aug. 1, 2, 6, 9, 1889</i>
Order for Ordinary Survey No. <i>216</i>	3rd. When the beams were in and fastened, and before the decks were laid....	<i>March 15. 1889, April 5. 1889, April 9. 1889, May 7. 1889</i>
Date <i>April 21. 1889</i>	4th. When the ship was complete, and before the plating was finally coated or cemented..	
No. <i>216</i> in builder's yard.	5th. After the ship was launched and equipped	
State dates of letters respecting this case		

General Remarks (State quality of workmanship, &c.) *This vessel has been built in accordance with the approved tracings forwarded on the 6th inst. with the keel and report No 3591 on same vessel. The requirements contained in the accompanying Memorandum, have been carried out as follows, viz:-*
1. The beams of the several decks are supported by double rows of pillars.
2. The Bridge side plating, and the sheer strake at the ends of bridge have been increased in thickness.
3. The strake of deck plating adjacent to the hatchways has been increased in thickness.
4. The butts of inside strakes, above 44 ins. wide are quadruple riveted; - No outside strake exceeds 46 ins.
5. The arrangement of string beams and web beams in D. & B. spaces as approved have been carried out, and the painting arrangements are satisfactory.

The Secretary's letters, dated as above, and the Rules in other respects, including the Committee's Circulars on steel, have been adhered to; she is built to the *3rd Rule*, having a Forecastle 46 feet, a Bridge 90 feet, and a Poop 51 feet long; a double bottom, constructed on the Cellular system 304 feet long, with water capacity for 774 tons, a fore peak tank holding 56 tons, and an after peak tank 44 tons, all tested as required by the Rules; she is much stronger in many parts than required by the Rules; the materials used in her construction, and the workmanship are very good.

State if one, two, or three decked vessel, or if open, orawning decked; and the lengths of poop, bridge, forecastle, *enclosed quarter deck* (If double bottom, state particulars on separate form.)

How are the surfaces preserved from oxidation? Inside *Cement (Portland) & paint* Outside *Paint*

I am of opinion this Vessel should be Classed *+ 100 A 1 Steel, 2 Sts, 1 in 01 Steel, 3rd Rule.*

The amount of the Entry Fee *£ 5* is received by me, *James Curpin*

Special *£ 121 : 15 : 6* q. p. 1889

(to be sent as per margin). Certificate *Gratis*

Committee's Minute

Character assigned *100 A 1 Steel*

2 Sts (1 Iron 1 Steel) 3 Sts