

IRON SHIPS.

Recd 27/8/70

No. 3194 Survey held at Glasgow Date, First Survey 22nd Jan^r 70 Last Survey 19 Aug^r 1870
On the S. S. "Lord of the Isles" Master Robinson

Tonnage under Tonnage Decks 2440.06 ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS. Half moulded breadth 18.75 Built at Glasgow
 Ditto of Spar Deck, or Awning Deck. 140.69 Depth from upper part of Keel to top of Upper Deck Beams 24.65 Total Depth if three or more Decks 31.65 When built 1870 Launched June 27/70
 Ditto of Houses on Deck 40.69 Girth of Half Midship Frame (as per Rule) 36.50 Total Depth of Half Midship Frame 43.50 By whom built R. Napier & Sons
 Gross Tonnage 2480.75 1st Number 70.90 Length 318.2 3rd Number 93.90 Owners Shaw, Maxton & Co.
 Crew Space, as per Rule Not measured 2nd Number 25.424 4th Number 29.878 Port belonging to London
 Register Tonnage, as a Steamer, cut on Beam 1941.45 Depths to Length 14.9 Breadths to Length 8.48 Destined Voyage Clyde to London & China
 Register Tonnage, as a Steamer, cut on Beam 1845.72 Per Register 31/8/70 If Surveyed while Building, Afloat, or in Dry Dock. While Building and Afloat

Length on deck as per Rule 318.3 Moulded Breadth 37.6 Depths from top of Floors to Upper and Main Deck Beams, as per Rule 29.4 Horse Power of Engines 240 No. of Decks Three
 Dimensions of Ship per Register, length 320.4 breadth 37.8 depth 21.65 No. of Tiers of Beams Three

	Inches in Ship	Inches required per Rule	Inches in Ship	Inches required per Rule	Inches in Ship	Inches required per Rule
Keel, if bar iron, depth and thickness	10 x 3	11 x 2 3/4	10 x 3	10 x 2 3/4	10 1/2 x 5 1/2	10 x 5 1/2
Do. if centre through plate, depth and thickness	10 x 3	10 x 2 3/4	10 1/2 x 5 1/2	10 x 5 1/2	24	24
Stem, if bar iron, moulding and thickness	10 1/2 x 5 1/2	10 x 5 1/2	24	24	2 1/4 times	twice depth
Stern-post for Rudder do. do.	10 1/2 x 5 1/2	10 x 5 1/2	24	24	2 1/4 times	twice depth
Stern-post for Propeller	10 1/2 x 5 1/2	10 x 5 1/2	24	24	2 1/4 times	twice depth
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	2 1/4 times	twice depth	2 1/4 times	twice depth
Frames, size of Angle Iron, for 2/3 length amidships	5 1/2 x 3 1/2	5 x 3	9 1/16	9 1/16	5 x 3	9 1/16
Do. for 1/3 at each end	5 x 3 1/2	5 x 3	8 1/16	8 1/16	5 x 3	8 1/16
Reversed Frames, size of Angle Iron	3 1/2 x 3	3 1/2 x 3	8 1/16	8 1/16	3 1/2 x 3	8 1/16
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	28	27 3/4	10 1/16	10 1/16	28	27 3/4
Do. at the ends	28	27 3/4	10 1/16	10 1/16	28	27 3/4
Do. do. do. at Bilge Keelson	10 1/16	10 1/16	8 1/16	8 1/16	10 1/16	10 1/16
Do. height extended at the Bilges	2 1/4 times	twice depth	2 1/4 times	twice depth	2 1/4 times	twice depth
Beams, Upper, Spar, or Awning Deck (No. 1) single or double Angle Iron, Plate or Tee Bulb Iron	7	7	7 1/16	7 1/16	7	7 1/16
Single or double Angle Iron on Upper edge	3 1/2	3 1/2	5 1/16	5 1/16	3 1/2	5 1/16
Average space	48	48	48	48	48	48
Beams, Main or Middle Deck (No. 2) single or double Angle Iron, Plate or Tee Bulb Iron	9	9	9 1/16	9 1/16	9	9 1/16
Single or double Angle Iron, on Upper Edge	3 1/2	3 1/2	7 1/16	7 1/16	3 1/2	7 1/16
Average space	48	48	48	48	48	48
Beams, Lower Deck, Hold or Orlop (No. 3) single or double Angle Iron, Plate or Tee Bulb Iron	9	9	9 1/16	9 1/16	9	9 1/16
Single or double Angle Iron on Upper Edge	3 1/2	3 1/2	7 1/16	7 1/16	3 1/2	7 1/16
Average space	48	48	48	48	48	48
Keelson Centre line, single or double plate, box, or intercostal, size of Plates	18	18	14 1/16	14 1/16	18	14 1/16
Do. Bulb Plate to Intercostal Keelson	12	13	12 1/16	12 1/16	12	12 1/16
Do. Size of Angle Irons	6 x 4	6 x 4	10 1/16	10 1/16	6 x 4	9 1/16
Do. Side Intercostal Keelson, size of Plates	24	24	10 1/16	10 1/16	24	10 1/16
Do. Angle Irons on tops of Floors	6 x 4	6 x 4	10 1/16	10 1/16	6 x 4	9 1/16
Do. Bilge Keelson, Bulb Iron	9	9	9 1/16	9 1/16	9	9 1/16
Do. do. Intercostal plates riveted to plating for 3/4 length	6 x 4	6 x 4	10 1/16	10 1/16	6 x 4	9 1/16
Do. do. Angle Irons	6 x 4	6 x 4	10 1/16	10 1/16	6 x 4	9 1/16
Side Stringers (No. 4) size of Angle Irons	6 x 4	6 x 4	9 1/16	9 1/16	6 x 4	9 1/16
Do. Intercostal plates riveted to plating for length	6 x 4	6 x 4	9 1/16	9 1/16	6 x 4	9 1/16

Transoms, material Iron or, if none, in what manner compensated for.
 Knight-heads Iron Hawse Timbers Iron
 Windlass Iron Patent Pall Bitt Iron
 The Frames extend in one length from Keel to Upper deck Stringer
 The Reverse Angle Irons on the floors and frames extend from the middle line to Main Deck and to Upper Deck alternately
 Keelsons. Are the various lengths of Plates and Angle Irons properly connected? Yes And are their butts properly shifted? Yes
 Plates, Garboard, double or Riveted to Keel, double or at upper edge, with Rivets (7/8 in.) diameter, averaging (3 1/2 ins.) from centre to centre.
 Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (7/8 in.) diameter, averaging (3 1/2 ins.) from centre to centre.
 Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (13/16 in.) thick, double or single Riveted; with Rivets (7/8 in.) diameter averaging (3 1/2 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? No
 Do. of three Strakes at Bilge for Half length, treble riveted with Butt Straps 1/16" thicker than their plates.
 Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets (7/8 in.) diameter, averaging (3 1/2 ins.) from centre to centre.
 Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge Single At lower edge double
 Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (1/16) thick, double or single Riveted; with Rivets (7/8 in) diameter, averaging (3 1/2 ins) from centre to centre.
 Do. Butts of Main Sheerstrake, double or treble Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for half length amidships. Breadth of laps of plating in double Riveting (6 times) Breadth of laps of plating in single Riveting (3 1/2 times)
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted?
 Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? Keels riveted to frames No. of Breasthooks, 5 Crutches, 5
 What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Be. Boiler
 Manufacturer's name or trade mark, Mosserud Iron, Fox Head & Co., Govan Bar Iron Works.

We certify that the above is a correct description of the several particulars therein given.
 Builder's Signature, R. Napier & Sons Surveyor's Signature, J. M. Mowbray

IRON SHIP FOUNDATION

Workmanship. Are the butts of plating planed or otherwise fitted? Planed
 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
 Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? Single pieces
 Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? Yes
 Are there any rivets which either break into or have been put through the seams or butts of the plating? a few in corner of Butts

Her Masts, Bowsprit, Yards, &c., are in Good condition, and sufficient in size and length. If they are of Iron or Steel give the 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 Schooner Rigged - 8219 Lm

Tested at Tipton 13th May 1870.
 by Samuel Trejenna

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No.	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	No.	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
	Number for equipment <u>29878</u>												
	Fore Sails,	Chain	300	1 3/16	59.2.0	1 3/16	59 1/10	Bowers	1	33.2.22	31.8.3.0	32.0	30 1/10
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).						(State Machine where Tested, and name of Superintendent).	1	33.1.0	31.1.1.0		
	Fore Topmast Stay Sails	Hempen Stream Cable	90	1	18.0.0	1 1/16		Stream	1	27.1.14	26.13.0.14	27.0.23	26 10/20
	Main Sails,	Hawser	90	12		12		Kedges	1	7.0.2	8.0.2.14	6-2	
	Main Top Sails,	Towlines ...	90	7		8			1	3.2.12	5.10.0.0	3.1	
		Warp	90	4									
		All of <u>good</u> quality.											

Her Standing and Running Rigging Gala wire sufficient in size and good in quality. She has Two Long Boat and 4 others

The present state of the Windlass is Good Capstan Good and Rudder Good Pumps Good and Efficient

Engine Room Skylights.—How constructed? of plate and angle iron How secured in ordinary weather? High iron bars

What arrangements are there for deadlights in such for bad weather? with Leak Skylight above, glass protected by iron gratings & covers

Coal Bunker Openings.—How constructed? of Iron flush with deck How are lids secured? by flat How high above deck? flush

Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board?
There are no bulwarks

Cargo Hatchways.—How formed? Plate and angle iron State size 11-6 by 10-0

If of extraordinary size, state how framed and secured? secured with iron bars

What arrangement for shifting beams? Shifting carlings fitted

Hatches, themselves, whether strong and efficient? Yes Main Hatchways.—State size 16-0 x 12 ft

Order for Special Survey No. 669 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Under Special
 Date May 14/70 Surveys held 2nd. On the plating during the progress of riveting Survey from
 Order for Ordinary Survey No. — while building 3rd. When the beams were in and fastened, and before the decks were laid 22nd Jan^r 1870
 Date — as per 4th. When the ship was complete, and before the plating was finally coated or cemented to
 No. 14 in builder's yard. Section 18. 5th. After the ship was launched and equipped 19th Aug^r 1870

General Remarks,
 Fore Mast 91-6 long, and 26 ins Diam
 Main " 81-6 " " 26 " "
 Both of Iron, three plates in the Round 7/16, and 6/16 thick, double riveted edges. Butts, double, and treble riveted.
 Mizzen Mast 74 ft x 18 1/2 Diam of Vancouver pine.
 This vessel is built in accordance with the appended Midship Section, and remarks made on the case by the Chief Surveyors received in your letter of 26th Feb^r 1870.

In what manner are the surfaces preserved from oxidation? Inside Cement & Oil paint Outside Oil paint

I am of opinion this Vessel should be Classed 100 A.1

The amount of the Entry Fee£ 5 : : : is received by me,
 Special£ 22 : : :
 Certificate gratis

(Travelling Expenses) (if any) £ —

Committee's Minute 30th Aug^r 1870

Character assigned 100 A.1

[Handwritten signature: Jm Moverly]
 This vessel appears eligible to be classed as recommended above by E 100 A.1
 27.8.70

Mr J. M. Shaw & Co. Surveyors & Shipbuilders
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 Cornhill, London E.C.4.