

IRON SHIPS.

Rec 2/8/70

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 Half moulded Breadth 18.75 Total Depth if three or more Decks 31.65
Depth from upper part of Keel to top of Upper Deck Beams 24.65 Depth from Half Mid-ship to Half Mid-ship 43.50
Girth of Half Mid-ship Frame (as per Rule) 36.50 3rd Number 93.90 Length 318.2

Gross Tonnage 2480.75 1st Number 70.90 Length 318.2
Crew Space, as per Rule 95.73 2nd Number 25.424 4th Number 29.878

Register Tonnage, as a Steamer, cut on Beam 1941.45 Depths to Length 14.9 Breadths to Length 8.48

Engine Room 539.30 Register Tonnage, as a Steamer, cut on Beam 1941.45 Per Register 31/8/70

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

Dimensions of Ship per Register, length 320.4 breadth 37.8 depth 21.65

Keel, if bar iron, depth and thickness 10 x 3 Inches in Ship, 16ths required per Rule 11 x 2 3/4
Do. if centre through plate, depth and thickness 10 x 3 Inches in Ship, 16ths required per Rule 10 x 2 3/4
Stem, if bar iron, moulding and thickness 10 1/2 x 5 1/2 Inches in Ship, 16ths required per Rule 10 x 5 1/2
Stern-post for Rudder do. do. 10 1/2 x 5 1/2 Inches in Ship, 16ths required per Rule 24
Stern-post for Propeller 24 (Class 100A)

Distance of Frames from moulding edge to moulding edge, all fore and aft 24
Frames, size of Angle Iron, for 2/3 length amidships 5 1/2 x 3 1/2 Inches in Ship, 16ths required per Rule 5 x 3 9/16
Do. for 1/3 at each end 5 x 3 1/2 Inches in Ship, 16ths required per Rule 5 x 3 8/16
Reversed Frames, size of Angle Iron 3 1/2 x 3 Inches in Ship, 16ths required per Rule 3 1/2 x 3 8/16

Floors, depth and thickness of Floor Plate at mid line for half the length amidships 28 Inches in Ship, 16ths required per Rule 27 3/4
Do. at the ends 28 Inches in Ship, 16ths required per Rule 27 3/4
Do. do. do. at Bilge Keelson 10 1/6 x 9 1/6 Inches in Ship, 16ths required per Rule 10 1/6 x 9 1/6
Do. height extended at the Bilges 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 Inches in Ship, 16ths required per Rule 7 7/16
Single or double Angle Iron on Upper edge 3 2 1/2 x 5 1/6 Inches in Ship, 16ths required per Rule 3 2 1/2 x 5 1/6
Average space 48

Beams, Main or Middle Deck (No. 2) single or double Angle Iron, Plate or Tee Bulb Iron 9 Inches in Ship, 16ths required per Rule 9 9/16
Single or double Angle Iron on Upper Edge 3 1/2 x 3 7/16 Inches in Ship, 16ths required per Rule 3 1/2 x 3 7/16
Average space 48

Beams, Lower Deck, Hold or Orlop (No. 3) single or double Angle Iron, Plate or Tee Bulb Iron 9 Inches in Ship, 16ths required per Rule 9 9/16
Single or double Angle Iron on Upper Edge 3 1/2 x 3 7/16 Inches in Ship, 16ths required per Rule 3 1/2 x 3 7/16
Average space 48

Keelson Centre line, single or double plate, box, or intercostal, size of Plates 18 Inches in Ship, 16ths required per Rule 18 14/16
Do. Bulb Plate to Intercostal Keelson 12 Inches in Ship, 16ths required per Rule 13 10/16
Do. Size of Angle Irons 6 4 Inches in Ship, 16ths required per Rule 6 1/2 4 9/16
Do. Side Intercostal Keelson, size of Plates 24 Inches in Ship, 16ths required per Rule 24 10/16
Do. Angle Irons on tops of Floors 6 4 Inches in Ship, 16ths required per Rule 6 4 9/16
Do. Bilge Keelson, Bulb Iron 9 Inches in Ship, 16ths required per Rule 9 9/16
Do. do. Intercostal plates riveted to plating for 3/4 length 6 4 Inches in Ship, 16ths required per Rule 6 4 9/16
Do. do. Angle Irons 6 4 Inches in Ship, 16ths required per Rule 6 4 9/16

Side Stringers (No. 4) size of Angle Irons 6 4 Inches in Ship, 16ths required per Rule 6 4 9/16
Do. Intercostal plates riveted to plating for length 6 4 Inches in Ship, 16ths required per Rule 6 4 9/16
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
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? Knees 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.? B. 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

Built at Glasgow
When built 1870 Launched June 27/70
By whom built R. Napier & Sons
Owners Shaw, Maxton & Co.
Port belonging to London
Destined Voyage Clyde to London & China
If Surveyed while Building, Afloat, or in Dry Dock. While Building and afloat.

Power of Engines, 240 Horse. No. of Decks, Three No. of Tiers of Beams, Three
Flat Keel Plates, breadth and thickness 42 14/16 36 12/16
Plates in Garboard Strakes, breadth and thickness 12 1/6 11/16 11/16
Do. from Garboard to upper part of Bilges one plate doubled for as per Section
Do. of doubling at Bilge, or increased thickness, and length applied 160 ft in 11/16 11/16
Do. from up. part of Bilge to l. edge of Sh'rstrake 36 15/16 36 15/16
Do. Main Sheerstrake, breadth and thickness 26 1/2 15/16 28 1/2 15/16
Do. of d'bling at Sh'rstrake, & length applied 12 1/4 10 1/4
Do. from Mn. to Up. or Spar Dk. Sh'rstrake. 6 5 5 5
Do. Up. or Spar Dk Sh'rstrake, brdth & thickns 39 10/16 45 1/2 8/16
Butt Straps to outside plating, breadth & thickness 4.4 8/16 4.4 8/16
Lengths of Plating 15 8/16 15 8/16
Shifts of Plating, and Stringers 15 8/16 15 8/16
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness..
Angle Iron on ditto 15 8/16 15 8/16
Tie Plates (fore and aft), outside Hatchways 15 8/16 15 8/16
Diagonal Tie Plates on Beams (No. of Pairs, 5) 15 8/16 15 8/16
Planksheer material and scantling Gutter Waterway
Waterways do. do. 3 1/2 3 1/2
Flat of Deck do. do. Leak 3 1/2 Leak
How fastened to Beams Galv nut & screw bolts
Stringer Plate on ends of Main or Middle Deck 48 13/16 53 12/16
Beams, breadth and thickness Yes Yes
(Is the Stringer Plate attached to the outside plating?) Yes Yes
Angle Irons on ditto (No. 2) 4.4 9/16 4.4 9/16
Tie Plates, outside Hatchways 15 10/16 15 9/16
Diagonal Tie Plates on Beams (No. of pairs, 5) Gutter Waterway
Waterways materials and scantlings 4 1/2 Yellow pine
Flat of Deck do. do. Galv nut & screw bolts
How fastened to Beams 37 1/2 9/16 37 1/2 9/16
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams Yes Yes
(Is the Stringer Plate attached to the outside plating?) Yes Yes
Angle Irons on ditto (No. 2) 4.4 9/16 4.4 9/16
Stringer or Tie Plates, outside Hatchways 15 9/16 15 9/16
Flat of Deck 3 Yellow pine
Ceiling betwixt Decks, thickness and material 3 Yellow pine & a. Blw
Do. in hold do. do. 7 1/2 7 1/4
Main piece of Rudder, diameter at head 7 1/2 7 1/4
Do. do. at heel Yes
(Can the Rudder be unshipped afloat?) Yes
Bulkheads No. 6 Thickness of 7/16 9/16
Do. Height up To Deck
Do. How secured to the sides of the ship Riveted to frames
Do. Size of Vertical Angle Irons 3 1/2 3 1/2 and their distance apart, 30
Do. Are the outside Plates doubled two spaces of Frames in length? Yes

IRON SHIP - 0019

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.
	Fore Sails,	Chain	300	1 1/2	59.2.0	1 1/16	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	13.0.14	12.8.3.0	13.0	
	Main Top Sails,	Towlines ...	90			8							
		Warp	90	7 1/2									
		All of good quality.	90	4									

Her Standing and Running Riggings Galvanized 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 Slot 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, 46 (Purity)

Fore Mast 91-6 long, and 26 ins Diam

Main Do 81-6 " 26 " "

Both of Iron, three plates in the Round 7/16, and 9/16 thick, double riveted edges. Butts, double, and treble riveted.

Mizen 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

Jm Moverly

This Vessel appears to be Classed as recommended above by E 100 A.1

27.8.70