

IRON SHIPS.

Requisition No. 316

Rev 18/5/65

No. 4910 Survey held at Port Glasgow Date 10th May 18 65
 on the Ship "Sarah Grace" Master John Christal Ferguson
 Tonnage Gross 1070.61 Engine Room _____ Register _____ Built at Port Glasgow
 When Built 1865 Launched 12th April 1865 By whom built Lawrence Hall & Co.
 Owners M. Grace & Co. Port belonging to London Destined Voyage Clyde to
 Surveyed Afloat or in Dry Dock While building

Length aloft	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse.
.....	106	6	.....	34	.....	.....	22	2	.....	.....
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	Inches in Ships.	Inches required per Rule.	Inches in Ships.	Inches required per Rule.	Inches in Ships.	Inches required per Rule.	Inches in Ships.	Inches required per Rule.	Inches in Ships.	Inches required per Rule.
Floors, Size of Angle Iron, and No. Double at bottom of Floor Plate for 2 ft. lengths of ship, and double to upper part of bilge	5	3	5	3	5	3	5	3	5	3
depth and thickness of Floor Plate at mid line	22	2	10	2	10	2	10	2	10	2
depth and thickness of Floor Plate at Bilge Keelson	14	.....	10	.....	10	.....	10	.....	10	.....
Size of Reversed Angle Iron, and No. Single at top of Floor Plate	3	3	3	3	3	3	3	3	3	3
Frames, Size of Angle Iron, single or double	5	3	5	3	5	3	5	3	5	3
Reversed Iron, to every frame, and on every alternate frame	3	3	3	3	3	3	3	3	3	3
Beams, Deck (No.) double Angle Iron, Plate, or Bulb Iron	8	.....	8	.....	8	.....	8	.....	8	.....
double or single Angle Iron, on upper edge	3	3	3	3	3	3	3	3	3	3
average space between	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches
if wood (No.) sided & moulded	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hold, or Lower Deck (No.) double Angle Iron, Plate, or Bulb Iron	8	.....	8	.....	8	.....	8	.....	8	.....
double or single Angle Iron, on upper edge	3	3	3	3	3	3	3	3	3	3
average space between	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches	3 feet 10 inches
if wood (No.) sided & moulded	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paddle, wood, sided and moulded, or if Iron, size of Plate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Engine	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keelson, single plate, or intercostal	15	.....	15	.....	15	.....	15	.....	15	.....
Size of Plates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Size of Angle Irons	5	4	5	4	5	4	5	4	5	4
Ditto Bilge (No.)	5	4	5	4	5	4	5	4	5	4
Ditto side, intercostal plate	5	4	5	4	5	4	5	4	5	4
Transoms, material Iron or, if none, in what manner compensated for.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Knight-heads, and Hawse Timbers	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

The Frames or Ribs extend in one length from Keel to Gunwale rivetted through plates with ($\frac{7}{8}$ in.) rivets, about (7 inches) apart.
 The reverse angle irons on the floors extend in one length across the middle line from Lower deck to Gunwale alternately
 " " and on the frames " " " from " to "
 Keelson, how are the various lengths of plates or angle irons connected? By Angle Iron Butt Straps
 Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets ($1\frac{1}{2} \times \frac{7}{8}$ in.) diameter averaging ($4\frac{1}{2}$ in.) from centre to centre of rivet.
 Edges from Garboards to upper part of bilge, worked carvel with a lining piece (— in.) thick, or clencher, double or single rivetted; rivets ($\frac{7}{8}$ in.) diameter, averaging ($3\frac{1}{2}$ ins.) from centre to centre of rivets.
 Butts from Keel to turn of bilge, worked carvel with a lining piece ($3\frac{1}{2}$ in.) thick, double or single rivetted; rivets ($\frac{7}{8}$ in.) diameter, averaging ($3\frac{1}{2}$ ins.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? No
 Edges from bilge to sheerstrake, worked carvel with a lining piece (—) thick, or clencher, double or single rivetted; rivets ($\frac{7}{8}$ in.) diameter, averaging ($3\frac{1}{2}$ in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? No
 Edge of Sheerstrake, double or single rivetted?
 Butts from bilge to planksheers, worked carvel with a lining piece ($3\frac{1}{2}$ in.) thick, double or single rivetted; rivets ($\frac{7}{8}$ in.) diameter averaging ($3\frac{1}{2}$ ins.) from centre to centre of rivets. Breadth of laps in double rivetting (5) Breadth of laps in single rivetting ()
 Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?
 Planksheer, how secured to the plating of the sides { Explain by sketch }
 Waterway " " planksheer and to the Beams { if necessary. }
 Deck Beams, how secured to the side? Beam ends turned down
 Hold or Lower Deck " Beam ends turned down
 Paddle " "
 No. of breasthooks Five crutches Five how are pointers compensated?
 What description of iron is used for the angle iron and plate iron in the vessel? Mosend Iron Co. Builder's Signature Lawrence Hall & Co.

4115 2m

Workmanship. Are the lands or laps of the clenchwork in all cases in breadth at least five times the diameter of the rivets in double rivetted edges and butts, and at least three times the diameter of the rivets where single rivetting is admitted? Yes
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? Solid lengths
Do the holes for rivetting plate to frames, lining pieces, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the outer plate? Yes
Are there any rivets which either break into or have been put through the seams or butts of the plating? A few

Her Masts, Yards, &c., are in Good condition, and sufficient in size and length.

She has SAILS.

CABLES, &c.

ANCHORS, and their weights.

N ^o .			Fathoms.	Inches.		N ^o .	Weight.
✓	Fore Sails,	Chain	300	4 1/2	Bower,	1	37.0.14
Two	Fore Top Sails,	" Stagnant short link 10.10. -	90	1 1/2	"	1	36.2.16
Sails	Fore Topmast Stay Sails,	Hempen Stream Cable	70	1 1/2	"	1	31.1.14
	Main Sails,	Hawser	90	8	Stream,	1	11.3.20
	Main Top Sails,	Towlines	90	6			
		Warp	90	5 1/2	Kedge,	1	6.0.24
		All of <u>Good</u> quality.	90	5		1	3.0.0

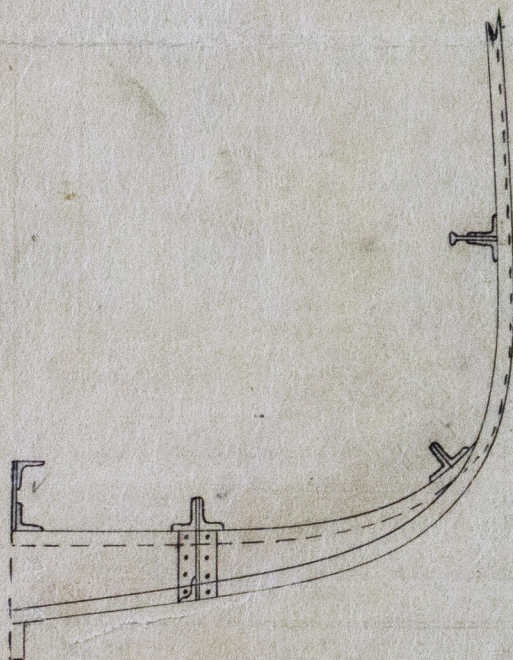
Her Standing and Running Rigging Hemp sufficient in size and Good in quality.

She has One Life Long Boat and Three others
The present state of the Windlass is Good with patent purchase
Capstans Good and Rudder Good Pumps Two cast metal, Good

General Remarks, Statement and Date of Repairs, extent of corrosion (if any) both internally and externally, and condition of rivets.

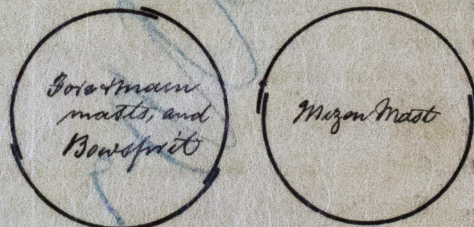
DATES of Surveys held while building, as per Section 17.	1st. On the several parts of the frame, when in place, and before the plating was wrought	} Specially surveyed while building from 11 th March 1864 to 10 th May 1865 in all 41 visits.
	2nd. On the plating during the progress of rivetting	
	3rd. When the beams were in and fastened, and before the decks were laid	
	4th. When the ship was complete, and before the plating was finally coated	
	5th. After the ship was launched	

This vessel has been built under special survey as per Order N^o 316; has iron gutter waterways, with full poop and fore-castle, with a deck house amidships for part of the crew. The butt straps of sheerstrakes extend from the frame abreast the butt; and the stringer plate on the ends of upper deck beams are treble rivetted.



The certificates of Bower Anchors are dated 6th Sept. & 22nd Decr 1864, and 13th February 1865; and for stream Anchor 16th January 1865, and all signed by Wm Macdonald, Superintendent, Mersey Docks & Harbour Board, Chain & Anchor Testing Department. The certificates of Bower Chain Cables are dated 9th February 1865, and the stream chain 23rd February 1865, and signed by James Haslam, Chain Test Works, Liverpool.

Masts &c.	Thickness of Plating	Rivelling of Butts	Rivelling of Edges	Diameter
Fore Mast	7/8	Treble	Double	29 inches
Main Mast	7/8	"	"	29 inches
Mizen Mast	7/8	"	"	22 inches
Bowsprit	7/8	"	"	24 inches



In what manner are the surfaces preserved from oxidation? Portland Cement between the floors to upper part of bilges; inside and outside with three coats of Red lead, and two coats of Messrs Innes's composition on bottom.

I am of opinion this Vessel should be classed A 1.

The amount of the Fee£ 5 : " : " is received by me,

Special£ 53 : 11 : "

Certificate (if required)£ " : " : "

Committee's Minute 19th May 1865

Character assigned A

See memo for 1st to 20.2.1865
22/5/65

H. J. B. Field
Robt. Luke

I Concur in the above recommendation
18 May 1865 J.H.R.



Lloyd's Register Foundation