

IRON SHIPS.

Pen 11/8/70

No. 5816 Survey held at Port Glasgow Date, first Survey 19th January Last Survey 25th July 1870
 on the Spar Decked Screw Steamer Renfrewshire Master Watt

Tonnage under Tonnage Deck	499.41	ONE, OR TWO DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>Port Glasgow</u>
Ditto of Spar Deck, or Awaiting Deck.	321.11	Half moulded breadth	14	When built <u>1870</u> Launched <u>16th June 1870</u>
Ditto of Poop, or Raised Or. Dk.		Depth from upper part of Keel to top of Upper Deck Beams	15.5	By whom built <u>Blackwood & Gordon</u>
Ditto of Houses on Deck	3.04	Girth of Half Midship Frame	26.8	Owners <u>James Turnbull</u>
Ditto of Forecastle		1st Number	56.3	Port belonging to <u>Port Glasgow</u>
Gross Tonnage	823.56	Length	194.5	Destined Voyage <u>Clyde to Black Sea</u>
Crew Space, as per Rule	50.52		2815	Surveyed while Building <u>Afloat, or in Dry Dock</u>
Register Tonnage, cut on Beam	773.04	2nd Number	1095035	
Engine Room	261.87	3rd Number		
Register Tonnage, as a Steamer, cut on the Beam	511.17	4th Number		
		Length	194.5	
		Depth to Length	14.29	
		Breadths to Length	6.9	

Length on deck as per Rule	Feet. 194	Inches. 7/10	Moulded Breadth	Feet. 28	Inches. 2/10	Depth from top of Keel to Deck Beam, as per Rule	Feet. 15	Inches. 5/10	Power of Engines	Horse. 90	N ^o . of Decks	N ^o . of Tiers of Beams	
Dimensions of Ship per Register, length, 200.5 breadth, 28.2 depth, 13.5													
Keel, if bar iron, depth and thickness	7 x 2 3/4		Inches in Ship	7 1/2 x 2 1/4		Inches required per Rule			Flat Keel Plates, breadth and thickness				
Do. if centre through plate, depth and thickness									Plates in Garboard Strakes, breadth and thickness	34	9/16	30	9/16
Stem, if bar iron, moulding and thickness	7 x 2 3/4			7 x 2 1/4					Do. from Garboard to upper part of Bilges	-	8/16	-	5/16
Stern-post do. do. do.	9 x 4 1/2			7 x 4 1/2					Do. of doubling at Bilge, increased thickness, and length applied	-	-	24 inches 1/2 length amidships	10/16
Distance of Frames from moulding edge to moulding edge, all fore and aft	21			22					Do. from upper part of Bilge to lower edge of Sheerstrake		7/16		7/16
Frames, size of Angle Iron, for 1/2 length amidships	Inches. 3 1/2	Inches. 3	Inches. 7/16	Inches. 3 1/2	Inches. 3	Inches. 6/16			Do. Sheerstrake, breadth and thickness	31	8/16	30	12/16
Do. for 1/4 at each end	3 1/2	3	7/16	3 1/2	3	5/16			Do. of doubling at Sheerstrake, and length applied	31	8/16	30	12/16
Reversed Frames, size of Angle Iron	3	2 1/2	6/16	2 1/2	2 1/2	5/16			Butt Straps to outside plating, breadth and thickness	9 1/2	9 1/2	9 1/2	9 1/2
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	20		8/16			7/16			Lengths of Plating	8.9	8.9	8.9	8.9
Do. at the ends	3 1/2		8/16	3 1/2		7/16			Shifts of Plating, and Stringers	Two Frames	Two Frames	Two Frames	Two Frames
Do. do. do. at Bilge Keelson	20		8/16			7/16			Gunwale Plate on ends of Awaiting, or Spar Deck Beams, breadth and thickness	22	7/16	22 1/2	7/16
Do. height extended at the Bilges	57		-	35		-			Angle Iron on ditto	3 x 3 x 4/16	3 x 3 x 4/16	3 x 3 x 4/16	4/16
Beams, Three Decked, Spar, or Awaiting Decked (No.) single or double Angle Iron, Plate or Tee Bulb Iron	5		5/16	5 1/4		5/16			Tie Plates (fore and aft), outside Hatchways	7 1/2	7/16	7 1/2	7/16
Single or double Angle Iron on Upper edge	2		4/16	13/4		2			Diagonal Tie Plates on Beams (No. of Pairs,)	7 1/2	7/16	7 1/2	7/16
Average space	42		-	42		-			Planksheer material and scantling	Pitch Pine	Pitch Pine	Pitch Pine	Pitch Pine
Beams, Upper or Middle Deck (No.) single or double Angle Iron, Plate or Tee Bulb Iron	7		7/16	7		7/16			Waterways do. do.	14 x 4	14 x 4	14 x 4	14 x 4
Single or double Angle Iron, on Upper Edge	3		2 1/2	5/16	2 1/2	5/16			Flat of Deck do. do.	3	3	3	3
Average space	42		-	42		-			How fastened to Beams	By screw Bolts	By screw Bolts	By screw Bolts	By screw Bolts
Beams, Lower Deck or Orlop (No.) single or double Angle Iron, Plate or Tee Bulb Iron	7		7/16	7		7/16			Stringer Plate on ends of Upper or Middle Deck Beams, breadth and thickness	30	1 1/16	28	10/16
Single or double Angle Iron on Upper Edge	4 1/2		4 1/2	8 1/16	4 1/2	8 1/16			Angle Irons on ditto (No.)	4 1/2 x 4 1/2	4 1/2 x 4 1/2	4 1/2 x 4 1/2	4 1/2 x 4 1/2
Average space	42		-	42		-			Tie Plates, outside Hatchways	10 1/2	9/16	10 1/2	1/16
Keelson Centre line, single or double plate, box or Intercoastal, size of Plates	24 1/2		9/16	22		7/16			Diagonal Tie Plates on Beams (No. of pairs,)	10 1/2	9/16	10 1/2	9/16
Do. Bulb Plate to Intercoastal Keelson	8		8/16	7		7/16			Waterways materials and scantlings	Pitch Pine	Pitch Pine	Pitch Pine	Pitch Pine
Do. Size of Angle Irons	4 1/2		4 1/2	3		7/16			Flat of Deck do. do.	3 1/2	3 1/2	3 1/2	3 1/2
Do. Side Intercoastal Keelson, size of Plates									How fastened to Beams	By screw Bolts	By screw Bolts	By screw Bolts	By screw Bolts
Do. Angle Irons on tops of Floors									Stringer Plates on ends of Lower Deck or Orlop Beams, in Hold	4 1/2 x 4 1/2	4 1/2 x 4 1/2	4 1/2 x 4 1/2	4 1/2 x 4 1/2
Do. Bilge Keelson, Bulb Iron	7		7/16	7		7/16			Angle Irons on ditto (No.)	7 1/2	7/16	7 1/2	7/16
Do. do. Angle Irons	4 1/2		4 1/2	3		7/16			Stringer or Tie Plates, outside Hatchways	4 1/2 x 4 1/2	4 1/2 x 4 1/2	4 1/2 x 4 1/2	4 1/2 x 4 1/2
Do. Side Stringers (No. one) size of Angle Irons	4 1/2		4 1/2	3		7/16			Flat of Deck				

Transoms, material Iron or, if none, in what manner compensated for.

Knight-heads Iron Hawse Timbers Iron

Windlass Harfield's Patent Pall Bitt None

The Frames extend in one length from Keel to Spar Deck Gunwale

The Reverse Angle Irons on the floors extend across the middle line to lower Deck Stringer

On all the Frames and to Gunwale on alternate Frames (2)

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 riveted at upper edge, with Rivets (10 3/4 in.) diameter, averaging (50 3/4 ins.) from centre to centre.

Do. Edges from Garboards to upper part of Bilge, worked Clencher, double & single Riveted; with Rivets (3/4 in.) diameter, averaging (3 1/4 ins.) from centre to centre.

Do. Butts from Keel to turn of Bilge, worked carvel with butt straps (9 1/8 x 5/16) thick, double & single Riveted; with Rivets (3/4 in.) diameter averaging (3 1/4 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? No.

Do. Edges of Sheerstrake, double or single Riveted. At upper edge Single at Angle Irons double At lower edge Double

Do. Butts from Bilge to Planksheers, worked Carvel with Butt Straps (8 1/16) thick, double & single Riveted; with Rivets (3/4 in.) diameter, averaging (3 1/4 ins.) from centre to centre. Breadth of laps in double Riveting (4 1/4 ins) Breadth of laps in single Riveting (30 2 3/4)

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double

Planksheer, how secured to the plating of the sides, { Explain by Sketch, } See Midship section here

Waterway " " planksheer and to the Beams, { if necessary. }

Beams of the various Decks, how secured to the sides? Beam ends turned down No. of Breasthooks, Four Crutes, Four

What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c. For Head & Co. Middleborough

Manufacturer's name or trade mark For Head & Co. Middleborough

We certify that the above is a correct description of the several particulars therein given.

Builder's Signature, Blackwood & Gordon Surveyor's Signature, Saml. Lapham

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? Solid lengths
 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 Butts only

Her Masts, Bowsprit, Yards, &c., are in Good condition, and sufficient in size and length. ~~If they~~ ^{are} of Iron ~~or~~ ^{do not} 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: Fore Mast 94 feet diameter 18 ins Main Mast 80 feet diameter 18 ins
Mizen Mast 70 feet diameter 14 ins

Thickness of Plate Rivetting of Butts Rivetting of Edges Angle Irons & No.
Fore Mast 5/16 & 5/16 Double Double 2 1/2 x 2 1/2 x 5/16 3
Main Mast 5/16 & 5/16 Double Double 2 1/2 x 2 1/2 x 5/16 3



Chain Cables and Anchors Tested at Lloyd's Tipton Roving House, S. The Grange

N ^o .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test as per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
	Fore Sails,	Chain <u>5025-4-40</u>		<u>Stud Iron</u>				Bowers	4555	18.1.26	19.5.3.0	<u>15 3/4</u>	<u>16 7/10</u>
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).	<u>270</u>	<u>17/16</u>	<u>37.4.0.0</u>	<u>1 5/8</u>	<u>31 Tons</u>		4556	18.3.10	19.15.1.7	<u>15 3/4</u>	<u>16 7/10</u>
	Fore Topmast Stay Sails	<u>Werner Stream</u>							4557	15.3.10	17.5.1.7	<u>12.3.24</u>	<u>14 13/20</u>
	Main Sails,	Chain Cable	<u>90 studs</u>	<u>13/16</u>	<u>11.18.0.0</u>			with Stock Stream	1	8.0.23		<u>6.2.0</u>	
	Main Top Sails,	Hawser	<u>90</u>	<u>9</u>				Kedges	do	4.0.12		<u>3 1/4 Cut</u>	
		Towlines	<u>90</u>	<u>7</u>				do	do	2.0.0		<u>13/4 "</u>	
		Warp											
		All of good quality.											

Her Standing and Running Rigging Kemp sufficient in size and good in quality. She has one life Long Boat and two other

The present state of the Windlass is Hand Capstan and Rudder good Pumps Two Main & One Donkey in Engine Room

Engine Room Skylights.—How constructed? Iron Comings How secured in ordinary weather? Quadrants & Hasps

What arrangements are there for deadlights in such for bad weather? Tarpaulings

Coal Bunker Openings.—How constructed? Iron Rims & Lids How are lids secured? By Checks How high above deck? Flush with Spar Deck

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? Spar Deck Flush

Cargo Hatchways.—How formed? Iron Comings connected to side plates by angle plates State size 21 feet by 9 feet

If of extraordinary size, state how framed and secured? Substantial Iron Comings with Athwartship Iron Calkings and Iron Pillars

What arrangement for shifting beams? Iron Lugs bore up with Nuts and Screw bolts to Comings

Hatches, themselves, whether strong and efficient? Strong & efficient Main Hatchways.—State size 21 feet by 9 feet

Order for Special Survey No. 533 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Specially Surveyed

Date 22nd Jan 1870 Surveys held 2nd. On the plating during the progress of riveting while building

Order for Ordinary Survey No. _____ while building 3rd. When the beams were in and fastened, and before the decks were laid from January

Date _____ as per 4th. When the ship was complete, and before the plating was finally coated or cemented to July 1870

No. 124 in builder's yard. Section 18. 5th. After the ship was launched and equipped in all 26 visits

General Remarks, This vessel has been built under Special Survey No 533 she is Schooner Rigged and is fitted with a Spar Deck 7.1 in height.

She was originally intended for the 1st grade as per approved Midship Section herewith but the Owner is now desirous of having her classed upon the Neutral principle and she has been compared with the 90 A grade as shown on the other side

It will be observed that her Scantlings are equal to and in many instances in excess of the requirements of the Rules for the Class sought except two strakes of Plating at turn of Bidge for half the vessel's length which should have been 2 1/16 thicker, but in consideration of the Floor Plates which are deeper and thicker all fore and aft and extend well over the turn of Bidge 16 ins in height more than the Rules require, as per sketch herewith appended, we are of opinion the deficiency is fully compensated for and worthy the favorable consideration of the Committee for the Class sought.

In what manner are the surfaces preserved from oxidation? Inside Portland Cement between Floors Outside Three coats of Red Lead to upper part of Bidge, three coats of Black Paint on Topsides

Opinion of this Vessel should be Classed 90 A1 subject to the approval of the Committee

The amount of the Entry Fee £ 5 : 0 : 0 is received by me,
 Travelling Expenses (if any) £ : :
 Special £ 38 : 13 : 0
 Certificate £ : :

General Committee's Minute August 18 1870

Character assigned 90 A1 Spardeck Passengers only

M.C. A.C.P.
 Gen Com from 13th October 1870
 Date 14th Oct 1870

Saml. Lapham
H. J. S. O. W.

