

# IRON SHIP.

100 JULY 82

5768

No. 5768 Survey held at Glasgow Date, First Survey 29<sup>th</sup> Sept 1881 Last Survey 29<sup>th</sup> June 1882

On the Sailing vessel "Merchenshire" (barque)

TONNAGE under Tonnage Deck 1,224.94  
 Ditto of Third Spar, on Awning Deck }  
 Ditto of Poop, or Raised Or. Dk. } 55.25  
 Ditto of Houses on Deck } 19.64  
 Ditto of Forecastle } 39.49  
 Gross Tonnage 1,339.62  
 Less Crew Space 64.00

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

Half Breadth (moulded) .. . . . 17.90  
 Depth from upper part of Keel to top of Upper Deck Beams 23.20  
 Girth of Half Midship Frame (as per Rule) .. . . . 36.55  
 1st Number .. . . . 77.65  
 1st Number if 2 Decked Vessel .. deduct 7 feet  
 Length .. . . . 230.10  
 2nd Number .. . . . 14,859  
 Proportions— Breadths to Length .. . . . 6.42  
 Depths to Length— Upper Deck to Keel .. . . . 9.91  
 Main Deck ditto .. . . .

Master John Pattie  
 Built at Glasgow  
 When built 1881-82 Launched 15/6/82  
 By whom built Alex. Stephen & Sons  
 Owners Thos. Law & Co.  
 Residence Glasgow  
 Port belonging to Glasgow  
 Destined Voyage Calcutta  
 If Surveyed while Building, Afloat, or in Dry Dock. Building & Afloat

Official Number

LENGTH on deck as per Rule ... 230.0 Breadth— Moulded... 35.8 DEPTH top of Floors to Upper Deck Beams ... 21.2 Power of Engines ...  Horse. No. of Decks with flat laid One & one No. of Tiers of Beams Two

	Inches in Ship.	Inches in Ship.	16ths in Ship.	Inches in Ship.	Inches in Ship.	16ths in Ship.		Inches in Ship.	16ths in Ship.	Inches in Ship.	16ths in Ship.
KEEL, depth and thickness	9 x 2 1/2	9 x 2 1/2		9 x 2 1/2	9 x 2 1/2		Flat Keel Plates, breadth and thickness	36	11	36	11
STEM, moulding and thickness	8 1/2 x 2 1/2	8 1/2 x 2 1/2		8 1/2 x 2 1/2	8 1/2 x 2 1/2		PLATES in Garboard Strakes, br'dth & thickness				
STERN-POST for Rudder do. do.	4 x 3	4 x 3		4 x 3	4 x 3		From Garboard to upper part of Bilges...		10		10
" " for Propeller							" Of Bilge at Bilge, or increased thickness, and length applied <u>half length</u>		11		11
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24		24	24		" From up. prt of Bilge to lr. edge of Sh'rstrake...		10		10
FRAMES, Angle Iron, for 2/3 length amidships	5 3/8	5 3/8		5 3/8	5 3/8		" Main Sheerstrake, breadth and thickness...	40	12	40	12
Do. for 1/3 at each end	5 3/4	5 3/4		5 3/4	5 3/4		" Of Bilge at Sh'atk & lng. applied				
REVERSED FRAMES, Angle Iron	3 1/2	3 1/2		3 1/2	3 1/2		" From Main to Upper or Spar Dk. Sh'rstrake...				
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	24	24		24	24		" Up. or Spar Dk. Sh'rstrake, br'dth & thick'ns...				
" thickness at the ends of vessel	7	7		7	7		Butt Straps to outside plating, breadth & thickness	18	11	18	11
" depth at 2/3 the half-bdth. as per Rule	12	12		12	12		Lengths of Plating	6	10	5	10
" height extended at the Bilges...	48	48		48	48		Shifts of Plating, and Stringers	2	10	2	10
BEAMS, Upper, Spar, or Awning Deck	8 1/2	8 1/2		8 1/2	8 1/2		Gunwale Plate on ends of Awning Spar or Upper Deck Beams, breadth and thickness...	38	10	31	10
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron							Angle Iron on ditto (also the gutter angle) ...	5 x 4	9	5 x 4	9
Single or double Angle Iron on Upper edge	3	3		3	3		Tie Plates fore and aft, outside Hatchways	13	10	13	10
Average space...	48	48		48	48		Diagonal Tie Plates on Beams No. of Pairs	4	13	10	13
BEAMS, Main, or Middle Deck							Flat of Up., Spar, or Awning Dk. * Y.P.	4	4	4	4
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron							How fastened to Beams <u>nut &amp; screw bolts</u>				
Single, or double Angle Iron, on Upper Edge							Stringer Plate on ends of Main or Middle Deck				
Average space...							Beams, breadth and thickness				
BEAMS, Lower Deck							Is the Stringer Plate attached to the outside plating?				
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron							Angle Irons on ditto, No.				
Single or double Angle Iron on Upper Edge	3	3		3	3		Tie Plates, outside Hatchways				
Average space...	48	48		48	48		Diagonal Tie Plates on Beams No. of pairs				
BEAMS, Hold, or Orlop							Flat of Middle Deck * do. do.				
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron							How fastened to Beams				
Single or double Angle Iron on Upper Edge							Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	32	9	32	9
Average space...							Is the Stringer Plate attached to the outside plating?				
KEELSONS Centre line, single or double plate, box, or Intercostal Plates	17 1/2	14		14	12		Angle Irons on ditto, No. <u>3 (one gutter bar)</u>	4 x 4	9	4 x 4	9
" Rider Plate	11	12		11	12		Stringer or Tie Plates, outside Hatchways	13	9	13	9
" Bulb Plate to Intercostal Keelson							Flat of Lower Deck * Decked over to angle of keel from each end, and length same as sides 3 feet inside	3	9	3	9
" Angle Irons	5	4		5	4		Diagonal tie plates on Beams, No. of pairs <u>2</u> and to upper turn of Bilge (guttering)	13	9	13	9
" Double Angle Iron Side Keelson							Ceiling betwixt Decks, thickness and material	6 x 2	M.P.		
" Side Intercostal Plate							" in hold do. do.	2 1/2	R.P.	2 1/2	
" do. Angle Irons	5	4		5	4		Main piece of Rudder, diameter at head	6 1/2		6	
" Attached to outside plating with angle iron	3 1/2	3		3 1/2	3		do. at heel	3 1/2		3	
BILGE Angle Irons	5	4		5	4		Can the Rudder be unshipped afloat? <u>Yes</u>				
" do. Bulb Iron							Bulkheads No. <u>One</u> No. per Rule <u>One</u>				
" do. Intercostal plates riveted to plating for length							" Thickness of <u>7/16 to 1/2 in.</u>				
BILGE STRINGER Angle Irons	5	4		5	4		" Height up <u>Upper deck</u>				
Intercostal plates riveted to plating for length							" How secured to sides of ship <u>Double frame angle bars</u>				
SIDE STRINGER Angle Irons							" Size of Vertical Angle Irons <u>3 1/2 x 3 x 8</u> and distance apart <u>30 ins.</u>				
							" Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>				

The FRAMES extend in one length from Keel to Gunwale Riveted through plates with 7/8 in. Rivets, about 4 apart.  
 The REVERSED ANGLE IRONS on floors and frames extend from middle line to Gunwale and to alternately  
 KEELSONS. Are the various lengths of Plates and Angle Irons properly connected? Yes And butts properly shifted? Yes  
 PLATING. Garboard, double riveted to Keel, with rivets 1/2 in. diameter, averaging 5 1/2 ins. from centre to centre.  
 " Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 in. diameter, averaging 3 1/2 ins. from centre to centre.  
 " Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 4 ins. from centre to centre.  
 " Butts of Three Strakes at Bilge for half length, treble riveted with Butt Straps 1/16 in. thicker than the plates they connect.  
 " Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 7/8 in. diameter, averaging 3 1/2 ins. from cr. to cr.  
 " Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3 1/2 ins. from cr. to cr.  
 " Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.  
 " Butts of Main Sheerstrake, treble riveted for half length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.  
 " Butts of Main Stringer Plate, treble riveted for half length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.  
 " Breadth of laps of plating in double riveting 5 1/2 in. Breadth of laps of plating in single riveting  
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble & double No. of Breasthooks, Three Crutches, Four  
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Best  
 Manufacturer's name or trade mark, Messrs. Cleveland & Bolsham & Co.  
 The above is a correct description.  
 Builder's Signature, Alex. Stephen & Sons Surveyor's Signature, J. J. House  
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Form No. 1 for Iron Ships—4000—24/5/81.

State clearly where plating is of alternate thicknesses—as at ends of vessel, or part, and if wood deck or other material.

**Workmanship.** Are the butts of plating planed or otherwise fitted? *Planed* 5768 *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*  
 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? *yes a few*

Masts, Bowsprit, Yards, &c., are *now* 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

	Length	Top Diameter	Second Diameter	Third Diameter	Fourth Diameter	Length	Length	Length
Foremast	83.9	30 dia	22 dia	23 dia	19 dia	48.0	67.6	63.0
Mainmast	86.4	30 "	22 "	23 "	19 "	48.0	67.6	63.0
Mizenmast	84.4	26 "	19 "	20 "	17 "	Four plates in the round, table riveted butts & double riveted lands.		
Bowsprit	36.9	22 "	18 "					

NUMBER for EQUIPMENT 19050

No.	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.				
								No.	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	
	Fore Sails,	Chain 28482... (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	270 3/4	1 13/16	88.82 3/4 ton 75.59 1/8 "	3 1/4 x 1 1/2	Blayton M. Fraser Dunlop	495	32.0.12	30.4.1.14	32 cwt	
	Fore Top Sails,	Iron Steam Chain	45 1/4	1	88.24 ton 75.18 "	4 1/2 x 1		496	32.2.14	30.11.3.14	59 cwt	
	Fore Topmast Stay Sails,	as Steel Wire as Hemp or Straw Cable	90	11		90 x 11		497	26.3.15	26.5.2.14	91 1/2 "	
	Main Sails,	Towline, Hemp as Steel Wire	90	11		90 x 11			91.2.13			
	Main Top Sails, and	Hawser	90	9 1/2		90 x 9 1/2		Stream Anchor	494	10.1.3	12.4.1.14	10 1/2 "
		Warp	90	6		90 x 6		Kedge	493	5.0.12	4.9.2.21	5 1/4 "
		quality good						2nd Kedge	492	2.2.24	5.3.3.0	2 1/2 "

Standing and Running Rigging *Wine, Hemp, Manila* sufficient in size and *good* in quality. She has *Four* Long Boats and *2-24 feet* & *2-2 feet*.  
 The Windlass *and Capstan Iron, American Walker Capstan, Patent* and Rudder *good* Pumps *good*  
 Engine Room Skylights *How constructed?*  
 What arrangements for deadlights in bad weather?  
 Coal Bunker Openings *How constructed?* *How are lids secured?* *Height above deck?*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea?  
 Cargo Hatchways.—How formed? *Right Scuppers and Eight water ports. Deep coaming plates and angles. Height above deck Grain 16 ins. Fore 15 ins & Quarter 23 ins.*  
 State size Main Hatch *16.0 by 10.6* Forehatch *8.0 by 6.0* Quarterhatch *8.0 by 6.0*  
 If of extraordinary size, state how framed and secured? *Ordinary Size*  
 What arrangement for shifting beams? *One deep oak plate in Grain Hatch*

Hatches, If strong and efficient? *yes (Solid hatches)*  
 Order for Special Survey No. *1631* DATES of Surveys held while building as per Section 18.  
 Date *5th Sept 1881*  
 Order for Ordinary Survey No. *1631*  
 Date *1881*  
 No. *240* in builder's yard.

- 1st. On the several parts of the frame, when in place, and before the plating was wrought
  - 2nd. On the plating during the process of riveting
  - 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 or cemented..
  - 5th. After the ship was launched and equipped
1881. Sept 29. Oct 6, 12, 14 & 28. Nov 3, 23 & 26  
 Dec 2, 14, 20, 24 & 29.  
 1882. Jan 11, 19, 26 & 29. Feb 2, 10, 16, 20, 23 & 24.  
 March 8, 16 and 29. April 4, 11, 14, 18, 21, 25 & 29.  
 May 5, 9, 16, 24 & 31. June 5, 13, 22 & 29

General Remarks (State quality of workmanship, &c.)  
*This vessel has been built in conformity with the approved Midship and Longitudinal Sections (29a) herewith, the instructions contained in the Secretary's letters dated 30th July and 16th August 1881, and otherwise in accordance with the Rules with a view to the grade contemplated.  
 The quality of workmanship and material is good.*

*Two decked vessel with  
 Poop 26 feet and Forecastle 28 1/2 feet.*

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, fore-castle, or raised quarter deck. (If double bottom, state particulars on separate form.)  
 How are the surfaces preserved from oxidation? Inside *Paint & Cement* Outside *Paint*

I am of opinion this Vessel should be Classed *100 A.1.*  
 The amount of the Entry Fee ... £ *5: 0: 0* is received by me, *J. J. House*  
 Special ... £ *56: 16: 0* *1/4/1882*  
 Certificate (to be sent as per margin) *68: 16: 0*  
 (Travelling Expenses, if any, £ ..)

Committee's Minute *Tuesday, 11th July, 18 82.*  
 Character assigned *100 A.1*  
*J. J. House*  
 Surveyor to Lloyd's Register of British and Foreign Shipping.  
 It is submitted that the vessel appears eligible to be classed as a 100 A.1 vessel with 2 Deck and 200 A.1

The Surveyors are requested not to write on or below the space for Committee's Minute.