

IRON SHIP.

No. 4098 Survey held at Dundee Date, First Survey Mar. 1st / 77 Last Survey Oct. 31st / 77 1877

On the Bk "Stuart" Master Fursman

TONNAGE under Tonnage Deck } 855.19 ONE, OR TWO DECKED, THREE DECKED VESSEL.
 Ditto of Third, Spar, or Awning Deck }
 Ditto of Forecastle }
 Ditto of Houses }
 Ditto of Forecastle }
 Gross Tonnage } 911.78
 Less Crew Space } 30.40
 Register Tonnage } 881.38 as cut on Beam

SPAR, OR AWNING DECKED VESSEL.
 HALF BREADTH (moulded) ... 14.0
 DEPTH from upper part of Keel to top of Upper Deck Beam ... 31.57
 GIRTH of Half Midship Frame (as per Rule) ... 33.64
 1st NUMBER ... 72.18
 1st NUMBER, if a THREE-DECKED VESSEL [deduct 7 feet] ...
 LENGTH ... 195.0
 2nd NUMBER ... 14075
 PROPORTIONS—Breadths to Length ... over 5
 Depths to Length—Upper Deck to Keel ... over 9
 Main Deck ditto ...

Built at Dundee
 When built 1877 Launched 10th Sep 77
 By whom built Messrs A. Stephen & Co
 Owners Messrs John Hay
 Port belonging to Liverpool
 Destined Voyage Middleborough
 If Surveyed while Building, Afloat, or in Dry Dock.
 While Building & Afloat.

LENGTH on deck as per Rule ... 195 Feet. Inches. BREADTH—Moulded ... 34 Feet. Inches. DEPTH top of Floors to Upper Deck Beams ... 19 1/2 Feet. Inches. Power of Engines ... Horse. No. of Decks with flat laid One and No. of Tiers of Beams Two

	Inches in Ship	Inches per Rule						
KEEL, depth and thickness	8 x 2 3/8	8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8
STEM, moulding and thickness	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8
STERN-POST for Rudder do. do. for Propeller	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8	7 3/8 x 2 3/8
Distance of Frames from moulding edge to moulding edge, all fore and aft	23	23	23	23	23	23	23	23
FRAMES, Angle Iron, for 2/3 length amidships Do. for 1/3 at each end	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3	4 1/2 x 3
REVERSED FRAMES, Angle Iron	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3	3 x 3
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships thickness at the ends of vessel depth at 2/3 the half-bdth. as per Rule height extended at the Bilges	29 x 7	22 1/2 x 7	14 x 7	11 1/4 x 7	51 x 45	29 x 7	22 1/2 x 7	14 x 7
BEAMS, Upper, Spar, or Awning Deck Single or double Angle Iron, Plate or Tee Bulb Iron Single or double Angle Iron on Upper edge Average space	8 x 8	8 x 8	3 x 6	3 x 6	46	8 x 8	8 x 8	3 x 6
BEAMS, Main, or Middle Deck Single or double Angle Iron, Plate or Tee Bulb Iron Single, or double Angle Iron, on Upper Edge Average space	8 x 8	8 x 8	3 x 6	3 x 6	46	8 x 8	8 x 8	3 x 6
BEAMS, Lower Deck, Hold, or Orlop Single or double Angle Iron, Plate or Tee Bulb Iron Single or double Angle Iron on Upper Edge Average space	8 1/2 x 8	8 1/2 x 8	3 x 7	3 x 7	46	8 1/2 x 8	8 1/2 x 8	3 x 7
KEELSONS Centre line, single or double plate, box, or Intercostal Plates Rider Plate Bulb Plate to Intercostal Keelson Angle Irons Double Angle Iron Side Keelson Side Intercostal Plate for 2 Length do. Angle Irons Attached to outside plating with angle iron	14 1/2 x 11	14 x 11	11 x 11	10 3/4 x 11	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7
BILGE Angle Irons do. Bulb Iron do. Intercostal plates riveted to plating for length	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7
BILGE STRINGER Angle Irons Intercostal plates riveted to plating for length	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7
SIDE STRINGER Angle Irons	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7	5 3 1/2 x 7

Transoms, material. Knight-heads. Hawse Timbers. Plates & angles
 Windlass of Iron. Pall Bitt Harfield's Patent

The FRAMES extend in one length from keel to gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.
 The REVERSED ANGLE IRONS on floors and frames extend from middle line to gunwale 8 to 6 in. 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 1/8 in. diameter, averaging 5 5/8 ins. from centre to centre.
 Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from centre to centre.
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/4 ins. from centre to centre.
 Butts of Three Strakes at Bilge for half length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.
 Edges from bilge to Main Sheerstrake, worked clencher, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from cr. to cr.
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 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 whole length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.
 Butts of Main Stringer Plate, treble riveted for 3/5 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.
 Breadth of laps of plating in double riveting 5 1/2 x 4 3/4 Breadth of laps of plating in single riveting 2 7/8

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double, or single Riveted?
 Waterway, how secured to Beams Gullet (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? Solid welded knees No. of Breasthooks, two Crutches, three
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Good.
 Manufacturer's name or trade mark, Floor's & Shell plates from Foxhead & Co; Frame Angles & Bulb Iron, Messrs & Co of Glasgow

The above is a correct description
 Builder's Signature, Alex Stephen & Co Surveyor's Signature, J. L. Dinnitt
 Surveyor to Lloyd's Register of British and Foreign Shipping.

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.*
 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? *In a few cases at the butts.*

Masts, Bowsprit, Yards, &c., are *of Iron* 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. *Yes.*

State also Length and Diameter of Lower Masts and Bowsprit - *Plates from Forehead &c.*
Fore mast. Length 74 ft., at Heel 18 1/2 x 7/8, at Partners, 25 1/2 x 7/8, at Head 16 1/2 x 7/8; Plates in round. 4.
Main " " " 78 1/2 " " " 18 1/2 x 7/8 " " " 25 1/2 x 7/8 " " " 16 1/2 x 7/8 " " " 4.
Mizen " " " 105 1/2 " " " 14 x 5/8 " " " 19 x 5/8 " " " 14 1/2 x 5/8 " " " 2.
Bowsprit outside bed 21 5/8 " " " 21 x 7/8 " " " 26 x 7/8 " " " 16 x 7/8 " " " 4.

NUMBER for EQUIPMENT 15013		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
N ^o .	SAILS.						Bowers	1.	29.0.0	27.17.0.0	29.0.0	27.17.0.0
	Fore Sails,	290.	1 1/4	57 1/4	270, 1 1/4	57 1/4						
	Fore Top Sails,							1.	26.0.14	25.14.1.14	26.0.14	25.14.1.14
	Fore Topmast Stay Sails	90	1 1/2	90	90-15 1/2			1.	23.3.14	23.15.2.14	23.3.14	23.15.2.14
	Main Sails,	90	1 1/2	90	90-9							
	Main Top Sails,	90	1 1/2	90	90-5 1/2							
	Warp	120	4				Stream	1	11.0.0	10.17.2.0	11.0.0	10.17.2.0
	quality <i>good.</i>						Kedges	1	5.2.34	7.2.2.0	5.2.0	10.17.2.0

Standing and Running Rigging *wire & Hemp* sufficient in size and *good* in quality. She has *2-28ft* Long Boats and *Six other boat*
 The Windlass is *good & efficient.* Capstan *efficient* and Rudder *efficient* Pumps *good & efficient.* 2 h^o L^o 1/2 h^o

Engine Room Skylights.—How constructed? How secured in ordinary weather?
 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?
Four pair of Scuppers and three pair of ports.
 Cargo Hatchways.—How formed? *plate Comings attached to fore & aft Carluys &c.*
 State size *Main Hatch 11-6 to beam 7-19-0 x 10-0 Fore hatch 7-8 x 5-0 Quarter hatch 7-8 x 5-0*
 If of extraordinary size, state how framed and secured?
 What arrangement for shifting beams? *Saddle beam in main hatch as above and a wood fore & after.*
 Hatches, If strong and efficient? *Yes.*

Order for Special Survey No.	Date	Order for Ordinary Survey No.	Date	No. in builder's yard.	DATES of Surveys held while building as per Section 18.	1st.	2nd.	3rd.	4th.	5th.
358	10 th May/77			67		On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the process of riveting	When the beams were in and fastened, and before the decks were laid...	When the ship was complete, and before the plating was finally coated or cemented..	After the ship was launched and equipped

General Remarks (State quality of workmanship, &c.) *Workmanship and Materials good.*
 This vessel has been constructed in accordance with the accompanying tracings 2 h^o submitted and approved See Secty's Letter 19th Jan/77.

She has a monkey fore-castle, also a raised quarter deck of the scantlings and arrangements as shown on the tracings
 Raised Q^r deck 33ft long from after part of stern post, and 3-6 high: beams 82 7/8 bulbs and double angles 3x3x7/8, Strangers 36x7/8; tie plates 9x7/8 and flat of deck 3/4 thick
 The whole of the butt straps for outside plating in this ship from keel to sunwale are treble riveted and the straps increased 1/8 where required by the Rules.

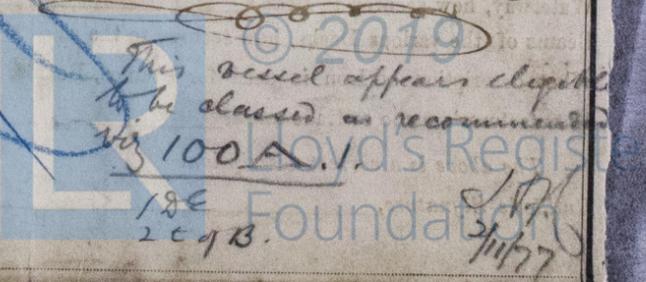
Wm Stephen & Sons

State if one, two, or three, decked vessel, or if spar, or running decked, and the lengths of *monkey 24ft* fore-castle, or raised quarter deck, and the length of double, or part double bottom. *33ft from after part of post.*
 How are the surfaces preserved from oxidation? Inside *Cemented to upper part of bilge & 3 coats of paint above.* Outside *Four coats of 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,
 Special ... £ 44 : 1 : 0 Oct 31st 1877
 Certificate ... : :
 (Travelling Expenses, if any, £ ...)

Committee's Minute *10-3-92* 2nd November, 1877.

Character assigned *100 A.1*



Attest 12th Nov 1877