

IRON SHIP.

No. 5123 Survey held at Glasgow Date, First Survey 4 November 79 Last Survey 26 June 1880
 On the S.S. Tennor Master David Scott

TONNAGE under Tonnage Deck 1904.16 **ONE, OR TWO DECKED, THREE DECKED VESSEL.**
~~SEAR, OR AWNING DECKED VESSEL.~~
 Ditto of Third Spar, or Arming Deck -
 Ditto of Poop, or Raised Or. Dk. 69.83
 Ditto of Houses on Deck 35.17
 Ditto of Forecastle 41.43
 Gross Tonnage 2050.64
 Less Crew Space 67.25
 Less Engine Room 1983.39
 Register Tonnage 1327.19
 as cut on Beam

HALF BREADTH (moulded) 17.39 Feet.
DEPTH from upper part of Keel to top of Upper Deck Beams 27.37
GIRTH of Half Midship Frame (as per Rule) 40.4
1st NUMBER 85.16
1st NUMBER, if a 3-DECKED VESSEL, deduct 7 feet 7
2nd NUMBER 78.16
LENGTH 308.5
2nd NUMBER 24.112
PROPORTIONS—Breadths to Length 8.87
 Depths to Length—Upper Deck to Keel 11.27
 Main Deck ditto 15.58

Built at Glasgow
 When built 1880 Launched 10 June 1880
 By whom built A. Stephen & Co.
 Owners Wm. Warrack
 Port belonging to Lith
 Destined Voyage Bombay via London
 If Surveyed while Building, Afloat, or in Dry Dock, under special survey.

LENGTH on deck as per Rule 308.5 Feet. **BREADTH**—Moulded 34 Feet. **DEPTH** top of Floors to Upper Deck Beams 25 Feet. **Power of Engines** 240 Horse. **No. of Decks with flat laid** THREE
 Dimensions of Ship per Register, length 309.5 breadth 35 depth 23.6

KEEL, depth and thickness 10 x 1 1/16 Inches in Ship. 10 x 1 1/16 Inches per Rule.
STEM, moulding and thickness 10 x 2 3/4 Inches in Ship. 10 x 2 3/4 Inches per Rule.
STERN POST for Rudder do. do. 10 1/4 x 5 3/4 Inches in Ship. 10 x 5 1/2 Inches per Rule.
 " " for Propeller 10 1/4 x 5 3/4 Inches in Ship. 10 x 5 1/2 Inches per Rule.
 Distance of Frames from moulding edge to moulding edge, all fore and aft 24 inches.

FRAMES, Angle Iron, for 2/3 length amidships 5 x 3 x 8 1/16 Inches in Ship. 5 x 3 x 8 1/16 Inches per Rule.
 Do. for 1/3 at each end 5 x 3 x 8 1/16 Inches in Ship. 5 x 3 x 8 1/16 Inches per Rule.
REVERSED FRAMES, Angle Iron 3 1/2 x 3 x 8 1/16 Inches in Ship. 3 1/2 x 3 x 8 1/16 Inches per Rule.
LOORS, depth and thickness of Floor Plate Longitudinal — 7/16 inches.
 t mid line for half length amidships Longitudinal — 7/16 inches.
 thickness at the ends of vessel Longitudinal — 7/16 inches.
 depth at 2/3 the half-bdth. as per Rule Longitudinal — 7/16 inches.
BEAMS, Upper, Starboard and Port Deck Longitudinal — 7/16 inches.
 Single Starboard and Port Deck Longitudinal — 7/16 inches.
 Single or double Angle Iron on Upper edge 3 x 3 x 8 1/16 Inches in Ship. 3 x 3 x 8 1/16 Inches per Rule.
 Average space 4 ft.
BEAMS, Main, Starboard and Port Deck Longitudinal — 7/16 inches.
 Single Starboard and Port Deck Longitudinal — 7/16 inches.
 Single or double Angle Iron on Upper edge 3 x 3 x 8 1/16 Inches in Ship. 3 x 3 x 8 1/16 Inches per Rule.
 Average space 4 ft.
BEAMS, Lower, Starboard and Port Deck Longitudinal — 7/16 inches.
 Single Starboard and Port Deck Longitudinal — 7/16 inches.
 Single or double Angle Iron on Upper edge 3 x 3 x 8 1/16 Inches in Ship. 3 x 3 x 8 1/16 Inches per Rule.
 Average space 4 ft.
KEELSONS Centre line, single or double plate, 5 1/4 x 10 x 10 inches. 5 1/4 x 10 x 10 inches.
 " Rider Plate 5 1/4 x 9 1/16 inches. 5 1/4 x 9 1/16 inches.
 " Starboard and Port Deck Longitudinal — 7/16 inches.
 " Angle Irons 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
 " Starboard and Port Deck Longitudinal — 7/16 inches.
 " Side Intercoastal Plate 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
 " do. Angle Irons 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
 " Attached to outside plating with angle iron 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
BILGE Angle Irons 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
 " do. Bulb Iron 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
 " do. Intercoastal plates riveted to plating 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
BILGE STRINGER Angle Irons 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
 Intercoastal plates riveted to plating for 3/4 length 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.
SIDE STRINGER Angle Irons 6 x 4 x 9 1/16 inches. 6 x 4 x 9 1/16 inches.

Transoms, material. Knight-heads. Hawse Timbers. Iron.
 Windlass Harfield's Patent Pall Bitt —
 The **FRAMES** extend in one length from Keel to Gunwale. Riveted through plates with 7/8 in. Rivets, about 7 apart.
 The **REVERSED ANGLE IRONS** on floors and frames extend from middle line to above main stringer and to upper deck. alternately
 The **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 3/16 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 3/4 ins. from centre to centre.
 " Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3 3/4 ins. from centre to centre.
 " Butts of Starboard 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 or single riveted; with rivets 7/8 in. diameter, averaging 3 3/4 ins. from cr. to cr.
 " Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3 3/4 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 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 1/4 Breadth of laps of plating in single riveting —
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double and single as per rule.
 Waterway, how secured to Beams Gutter (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? Berm Keels Riveted to Beams No. of Breasthooks, 4 Crutches, 3
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angles Moulded
 Manufacturer's name or trade mark, Plates "Parkhead" "Fox Head" "Conbridge"
 The above is a correct description.
 Builder's Signature, Ally Stephen & Co. Surveyor's Signature, James Mordaunt
 Surveyor to Lloyd's Register of British and Foreign Shipping.

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed where practicable*
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? *Very few and in Butts only* 269 x 5 Iron

Masts, ~~main~~ Yards, &c., are *all* 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 *Two masts Schooner rigged*
"mossend", Beat { Fore Mast 89' 3" - 25' 18 1/2" 15 1/2" 18' } *Two plates in circle 7 1/2" at head 1/2 double riveted edges,*
Beat, boiler plate, { Main Mast 83' 3" - 24' 17 1/2" 14 1/2" 19' } *triple riveted butts, doubled at head for 8 ft with 7/8*
hot & cold tested

NUMBER for EQUIPMENT 28899		Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested & Suprntd.	
SAILES.		CABLES, &c.											
N ^o .	Chain	47.97	135	270-1 1/4	6 3/4	270-1 1/4	1920 May 50 Supton	Bower Anchors	5266	34.3.7	325.2.14	34	21 1/2 24 May 50 Supton
	Fore Sails,	(State Machine where tested, Date, or No. of Certificate, & Name of Superintendent.)	135	270-1 1/4	8 3/10	270-1 1/4	E. R. Sait	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	5265	33.0.21	31.1.1.0	34	E. R. Sait
	Fore Top Sails,	Iron Str'm Chain	75	1 1/8	22 3/4	75-1 1/8	29 May 50 do, do.		5264	30.0.7	28.14.1.14	29	
	Ditto do.			34 1/8									
One Sait	Fore Topmast Stay Sails,	Hmpn Strm Cbl	90	12	Manilla	90-12		Stream	9485	10.1.22	12.8.3.0	10 3/4	27 May 50 Netherton, J. G. Sait
	Hawser ...		90	3 1/4	Steel	90-11		Kedge	5263	5.3.4	8.2.3.7	5 1/2	21 May 50 Supton E. R. Sait
	Main Sails,	Towlines	90	7 1/2	Manilla	90-11				1.1.21			
	Main Top Sails,	Warp	100	2 1/4	Steel	90-7 1/2		Ditto	9376	2.1.15	5 tons	2 1/2	27 May 50 Netherton, J. G. Sait
and	quality	New	90	6	Hemp					0.2.24			
			90	6	-do-								

Standing and Running Rigging *Wire & Hemp* sufficient in size and *good* in quality. She has *Six* Boatswain (2 with buoyancy)
The Windlass is *Good* Capstan *and* Rudder *Good* Pumps *Good & Efficient*
Engine Room Skylights.—How constructed? *Teak frame on top of iron house* How secured in ordinary weather? *Bars.*
What arrangements for deadlights in bad weather? *Teak framing with Bulls' eyes*
Coal Bunker Openings.—How constructed? *Circular casting and framed hatches* How are lids secured? *Screwed and with hatch covers* Height above deck? *1 1/2 ft above deck*
Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *5 scuppers & 5 water pots each side*

Cargo Hatchways.—How formed? *Plate and angle iron*
State size Main Hatch *20 x 12* Forehatch *12 x 9* Quarterhatch *12 x 9 & 20 x 12*
If of extraordinary size, state how framed and secured? *Dimensional with plate beams at large hatches*
What arrangement for shifting beams?
Hatches, If strong and efficient? *Solid hatches, good*

Order for Special Survey No.	1451	1879 - November 14	December 1.4.8.12.16.19.23.26.30
Date	<i>Dec 19 1879</i>	1880. January 6.9.12.16.20.23.27.30. February 4.6.	
Order for Ordinary Survey No.	1451	13.17.20.26. March 1.5.8.11.15.22.25.29. April 1-6	
Date	<i>Dec 19 1879</i>	April 13.16.20.27.30. May 7.12.18.21.25.27	
No.	2444	June 1.4.7.9.15.23.26 th	
in builder's yard.		as per Section 18.	
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			

General Remarks (State quality of workmanship, &c.) *On upper deck (over Engine and Boiler space) an iron str 4 1/2 is fitted tapering into stringer plate 24 feet from after end of Engine Hatch - and forward for 16 feet before main hatch.*
The Workmanship is of good quality.
Built in accordance with the approved sketches of midship and longitudinal sections herewith and in general conformity with the rules with a view to the grade contemplated, having reference also to Committee's Letter dated 11th Nov 1879
Fitted with Double bottom constructed on the cellular system for whole length practicable, 236 feet, containing 419 tons. VBL 36 feet and 40 tons in after portion, 40 ft and 83 tons in 2nd after, under Engines & Boilers 60 ft, 134 tons. Forward side of Boilers 52 feet 122 tons. Forward portion 40 feet and 40 tons. all properly tested and found satisfactory.
Fitted with Poop 32 feet long. Forecastle 36 feet long. Bridge midships 20 feet to 36 feet at sides, with side houses each side, and, centre house 14 x 12. Engine casing 18 feet long and boiler gallery &c 34 feet long

State if one, two, or three decked vessel, or if spar, or awning decked, and the lengths of poop, forecastle, or raised quarter deck, and the length of double, or ~~on~~ *on* bottom. *as detailed above, 236*
How are the surfaces preserved from oxidation? Inside *Cement and Paint* Outside *Paint*
I am of opinion this Vessel should be Classed *100 A 1 Three-Decked Rule, Double Bottom*
The amount of the Entry Fee ... £ 5 : : : is received by me, *M. 28th Saml. Lapthorn*
Special ... £ 74 : 11 : 6 *June 1880*
Certificate ... *Printed*
(Travelling Expenses, if any, £ ...)

Committee's Minute *Tuesday, June, 29th, 1880*
Character assigned *100 A 1 2nd class*
Lloyd's Register
Surveyor to Lloyd's Register of British and Foreign Shipping.
It is submitted that this vessel appears to have been built in accordance with the approved plans and eligible to be classed 100 A 1 as recommended.
20th 3rd class, beam 36 feet, double bottom 236 ft.
29.6.80