

IRON SHIPS.

5925

Rec 30/12/69
18

No. 2444 Survey held at Glasgow Date 28th Dec^r
 on the Ship "Bertha" Master Haddock
 Tonnage under tonnage deck 1300.83 Built at Glasgow When built 1871 Launched 12th Dec^r 67
 Ditto of poop 90.08 or upper deck 90.08 By whom built Barclay Curle & Co Owners G. Marshall
 Ditto of engine room 1.22 Port belonging to London Destined Voyage Calcutta
 Total Register tonnage 1458.13
 Gross Tonnage 11
 If Surveyed while Building, Afloat, or in Dry Dock Whilst building and afloat

Length aloft 23 Feet. 9 Inches. Extreme Breadth 37 Feet. 4 Inches. Depth from top of Upper Deck Beam to top of Floor 23 Feet. 9 Inches. Power of Engines 1 Horse. No. of Decks Two

(Dimensions of Ship per Register, length 23.2 breadth 37.4 depth 23.1)

	Inches in Ship.			Inches required per Rule.			Plates in Garboard Strakes, breadth and thickness					
	Inches.	Inches.	16ths.	Inches.	Inches.	16ths.	Inches.	16ths.	Inches.	16ths.	Inches.	16ths.
	In Ship.	In Ship.	In Ship.	per Rule.	per Rule.	per Rule.	In Ship.	In Ship.	per Rule.	per Rule.	In Ship.	16ths.
Keel, if bar iron, depth and thickness	12	3		9	3		30	14	30	14		
„ if plate iron, breadth and thickness												
Stem, if bar iron, moulding and thickness	12	3		9	3							
„ if plate iron, breadth and thickness												
Stern-post, if bar iron, moulding and thickness	9	3 1/2		9	3							
„ if plate iron, breadth and thickness												
Distance of Frames from moulding edge to moulding edge, all fore and aft	24			24								
Frames, Size of Angle Iron, single or double	5	3 1/2	90	5	3 1/2	90						
„ Reversed Iron, to every frame	to the Hold Beams											
„ or every other frame	to the Gunwale											
Floors, depth and thickness of Floor Plate at mid line	2 1/2	10	25	10	25	90						
„ Ditto ditto at Bilge Keelson	14											
„ Size of Reversed Angle Iron, and No. 1 3/2 at top of Floor Plate	3 1/2	3	90	3 1/2	3	90						
Beams, Deck (No.) double Angle Iron, Plate, Tee, or Bulb Iron	9		90	9		90						
„ double or single Angle Iron, on upper edge	3 1/2	3 1/2	70	3 1/2	3 1/2	70						
„ average space between	4 feet			4 feet								
„ Hold, or Lower Deck (No.) double Angle, Tee, Plate, or Bulb Iron	9		90	9		90						
„ double or single Angle Iron, on upper edge	3 1/2	3 1/2	70	3 1/2	3 1/2	70						
„ average space between	4 feet			4 feet								
„ Paddle, sided and moulded, thickness of Plate size of Angle Iron												
„ Engine												
Keelson, single or double plate, box, or intercostal	intercostal											
„ Size of Plates	30	10	25	10	25	90						
„ Size of Angle Irons	5 1/2	4 1/2	90	5 1/2	4 1/2	90						
„ Side, single or double, plate, box, or intercostal	intercostal											
„ Bilge (No.) at each Bilge, single, or double, plate, or box	5 1/2	4 1/2	90	5 1/2	4 1/2	90						

Transoms, material Am Plate if none, in what manner compensated for.

Knight-heads, and Hawse Timbers and Beams

The Frames extend in one length from middle line to Gunwale rivetted through plates with (1/2 in.) rivets, about (1) apart.

The reverse angle irons on the floors extend in one length across the middle line from upper part of Hold Beams to G.

„ „ „ on the frames „ „ „ from middle line to Gunwale

Keelson, how are the various lengths of plates or angle irons connected? by lining pieces

Plates, Garboard, double or rivetted to keel, double or at upper edge, with rivets (1/2 in.) diameter, averaging (4 1/2) apart.

„ Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (1/2 in.) diameter, averaging (3 1/2 ins.) apart.

„ Butts from Keel to turn of bilge, worked carvel with butt straps (1/8 & 1/8) thick, double or single rivetted; with rivets (1/2 in.) diameter, averaging (3 ins.) apart. Do the butt straps 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; with rivets (1/2 in.) diameter, averaging (3 1/2 in.) apart. Do the butt straps lap over and rivet through the lands of the strake below? No

„ Edges of Sheerstrake, double or single rivetted? At upper edge single to Bulw At lower edge Double

„ Butts from bilge to planksheers, worked carvel with butt straps (1/8 & 1/8) thick, double or single rivetted; with rivets (1/2 in.) diameter, averaging (3 ins.) apart. Breadth of laps in double rivetting (1/2) Breadth of laps in single rivetting (1)

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

Planksheer, how secured to the plating of the sides { Explain by sketch } from Bulwards

Waterway „ „ planksheer and to the Beams { if necessary. } Gutter

Deck Beams, how secured to the side? Welded knees rivetted to Frames

Hold or Lower Deck ditto G

Paddle „ „ No. of breasthooks 10 crutches 10

What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.? Washed Angle B

Manufacturer's name or trade mark and Corsette Crown Plates

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

Builder's Signature Barclay, Curle & Co Surveyor's Signature S. B. D. Dalrymple

Lloyd's Register of Shipping

IRON 44-0378

5925 Iron

Workmanship. Are the lands or laps of the clenched work in all cases in breadth at least five and a half times the diameter of the rivets in double rivetted edges and butts, and at least three and a quarter 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? Yes
 Do the holes for rivetting 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 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 in corners of Butts

Her Masts, Bowsprit, Yards, &c., are in Good condition, and sufficient in size and length. (If they are of Iron or Steel 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 rivetting, quality of Materials, and if stamped with Maker's name.)

The two joining and two Anchor spare Shackles, Weight 2.2.13 for 1 1/2" Stud Chain have been tested to 13 1/2 Tons by R. Burrell, Dec. 18th 1867; Sample of 12 Links taken from Chain Cables No. 2408 & 2409 broke at 9 1/2 Tons

N	She has SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c	No.	Weight Ex. Stock.	Test as per Certificate.	Wght req'd per Rule.	Test req'd per Rule.
	Fore Sails,	Chain	300	1 1/2"	13 1/2	1 1/2"	13 1/2	Bowers	3	34.0.3	31.13.12.1	34	31 1/2
	Fore Top Sails,	Hempen Stream Cable	90	12	10	10	10	Stream	1	34.0.0	31.12.2	34	31 1/2
	Fore Topmast Stay Sails,	Hawser	90	1	18	1	1	Kedges	1	24.2.4	26.15.3.3	28.3.1	27 1/2
	Main Sails,	Towlines	90	10	10	10	10			13.2.1	12.18.3	13	13
	Main Top Sails,	Warp	90	10	10	10	10			1.3.1	1.12.12.0	1.0	1.0
	and	All of <u>Good</u> quality.	90	10	10	10	10			3.1.2	5.2.2	3 1/2	3 1/2

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

She has Two 20 ft Long Boat and Two Life Boats 20 ft each, one Gunwale 24 ft

The present state of the Windlass is New Capstan New and Rudder New Pumps New and efficient

Order for Special Survey No. 492 Date June 9/67 while building as per Section 18. DATES of Surveys held 1st. On the several parts of the frame, when in place, and before the plating was wrought 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

State if she has a Spar Deck No Poop Yes or Forecastle Yes

General Remarks, Fitted with a Side Intercostal Keelson midway between Middle line and Bilge Keelson 2 1/2 x 7/8, with two Angle Bars on top 5 x 4 x 9/8 and extended as far forward and aft as practicable. Frames spaced 24 ins apart and doubled with Angle Bars same size as Frames, extending to the upper part of Bilges. Bulb Bar fitted to middle line Intercostal Keelson 10 x 7/8. let down between Floors and rivetted to Intercostal Plate. Bilge Keelson and two side stringers formed of double Angle Bars back to back 5 1/2 x 4 1/2 x 9/8 extending fore and aft. Spruce-plating plate to Hold Beams 1 1/2 x 7/8 and fitted with Gunwale Plate and Sheers-tracks are treble rivetted. Hold Beam stantions to each Beam 3 1/2 ins. The Fore-mast and Bowsprit of iron, formed of four plates 7/8 and 5/8 thick, the latter doubled at Bed and fitted with a 7/8 centric plate in way of wedding. The lands double clenched and butts treble carvel rivetted. Fore and Main Yards of iron, lower Topsail Yards of steel 7/8, 5/8, 3/4 thick lands single clenched and butts treble carvel rivetted.

In what manner are the surfaces preserved from oxidation? Inside Flat of bottom with Portland Cement and extended to the upper part of Floors Outside Red Lead Oil and patent paints

I am of opinion this Vessel should be Classed A
 The amount of the Fee£ 5 : : : is received by me,
 Dec. 1867 Special£ 42 : 19 : :
 Certificate (if required)£ 12 : : :

Committee's Minute 31st December 1867
 Character assigned A

R. Darwin
 The Hull of this sailing Ship (built of iron) appears eligible for Classing A, and the Ship to be subject to Committee's consideration of the light weight of 3-1/2" Power Anchor as recommended above. 30/12/67 J.L.