6030

IRON SHIPS.

Rec 22/2/68

No. 2111 Survey held at Birkenhead & Liverpool Date August 6/67 to Febr. 20 1868

on the Ship "Bengal" Master — Code

Tonnage under tonnage deck 1191, 23 — Built at Birkenhead — When built 1867 & 68 — Launched Jan. 11

Ditto of poop 85, 91 Forecastle ~~or spar deck~~ 44, 54

Ditto Poop, Round House ~~of engine room~~ 16, 41 Crew Space 41, 88 — By whom built Laver & Co. — Owners H. A. Clint & Co.

Total Register tonnage 1296 21/100

Gross Tonnage 1338 02/100 — Port belonging to Liverpool — Destined Voyage Calcutta

If Surveyed while Building, Afloat, or in Dry Dock While building, afloat & in Queen's graving dock

Builder's Length aloft	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse.	N°. of Decks
	210	6		37	0		22	6	—		Two

(Dimensions of Ship per Register, length 212, 8 breadth 37, 2 depth 22, 5)

	Inches in Ship.			Inches required per Rule. for 1000 tons Scale.		
Keel, if bar iron, depth and thickness	8½ × 3			8½ × 3		
,, ~~if plate iron, breadth and thickness~~						
Stem, if bar iron, moulding and thickness	8½ × 3			8½ × 3		
,, ~~if plate iron, breadth and thickness~~						
Stern-post, if bar iron, moulding and thickness	10 × 3			8½ × 3		
,, ,, ~~if plate iron, breadth and thickness~~						
Distance of Frames from moulding edge to moulding edge, all fore and aft	24			24		
	Inches. In Ship.	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	Inches. required per Rule.	16ths required per Rule.
(See Remark on other side) Frames, Size of Angle Iron, single ~~or~~ double	5	3	9/16	5	3	9/16
,, ,, Reversed Iron, if to every frame ~~or~~ every alternate frame to Gunwale	3½	3	8/16	3½	3	8/16
Floors, depth and thickness of Floor Plate at mid line	25	ends	10/16 8/16	24¼	ends	10/16 8/16
,, Ditto ditto at Bilge Keelson	11½	—	—	—	—	—
,, Size of Reversed Angle Iron, and No. One at top of Floor Plate	3½	3	8/16	3½	3	8/16
Beams, Deck (N°. ——) ~~double Angle Iron~~, ~~Plate~~, Tee, ~~or~~ Bulb Iron (double in way of Keelsons & alternate frames)	5¾ × 5/8 × 9/16			Of plain Bulb 9¼	—	9/16
,, ,, double or single Angle Iron, on edge	—	—	—	3½	3½	7/16
,, ,, average space between	48	—	—	48	—	—
,, Hold, or Lower Deck (N°. ——) ~~double Angle~~, Tee, ~~Plate, or~~ Bulb Iron (alternate frames)	Same size as upper deck			9¼	—	9/16
,, ,, double or single Angle Iron on edge	—	—	—	3½	3½	7/16
,, ,, average space between	48	—	—	48	—	—
,, Paddle, sided and moulded, ____ thickness of Plate ____ size of Angle Iron	—	—	—	—	—	—
,, Engine ,, ,, ,, ,,	—	—	—	Size 16 × 10¾ Box		
Keelson, ~~single or double plate~~, box, ~~or intercostal~~	17 × 11/16			17		11/16
,, Size of Plates	18 × 9/16			16		11/16
,, Size of Angle Irons	5½ × 4½ × 9/16			3½	3	8/16
,, ~~Side, single or d'ble, plate, box, or~~ intercostal	17 × 11/16			17		11/16
,, Bilge (No. One) at each Bilge, single, of double, ~~plate, or box~~ angle irons	5½	4½	9/16	5½	4½	9/16
	5½	4½	9/16	5½	4½	9/16

	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	16ths required per Rule.
Plates in Garboard Strakes, breadth and thickness	36	13/16	36	13/16
Ditto from Garboard to upper part of Bilges	—	12/16	—	12/16
,, from upper part of Bilge to a perpendicular height from upper side of Keel of ⅗ths the entire depth of Hold	—	11/16	—	11/16
,, from ⅗ths depth of Hold to lower edge of Sheerstrake	— ends	11/16 10/16	ends	10/16 9/16
,, Sheerstrake, breadth and thickness	48	11/16	36 ends	12/16 10/16
Butt Straps to outside plating, breadth and thickness	11 wide & same thickness as the plates			
Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness	36½ 30 ends	10/16	30¼ 22¼ ends	10/16
Angle Iron on ditto	5½ × 4½ × 9/16		5 × 4½ × 9/16	
Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways	13½	10/16	13¾	10/16
Diagonal Tie Plates on ditto	13½	10/16	13¾	10/16
Planksheer, materials and scantlings	Iron Gutter			
Waterway ditto ditto				
Flat of Upper Deck, thickness and material	4 Pine		4	—
,, ,, how fastened to Beams	Nut & screw bolts			
Ceiling betwixt Decks and in Hold, thickness and material	2 Pine 3 R. F.		—	—
Clamps or Spirketting ditto	—		—	—
Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness	25	10/16	22¼	10/16
Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams	13½	10/16	13¾	10/16
Stringers in Hold	Double Angle Irons		5 × 4½ × 9/16	5 × 4½ × 9/16
Flat of Lower Deck, thickness and material	3 Pine			
Main piece of Rudder, diameter at head	6	—	6	—
,, ,, ,, at heel	4	—	3¼	—
(Can the Rudder be unshipped afloat Yes)				
Bulkheads, N°. 1 Thickness of Plates	—	7/16	—	7/16
,, Height up To Upper deck				
,, how secured to the sides of the ship Double frames				
,, size of vertical angle irons 3½ × 3 × 9/16 and their distance apart 30 ins				

Plates average length 10-0

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

Knight-heads, and Hawse Timbers Plates & angle iron

The Frames extend in one length from Keel to Gunwale rivetted through plates with (7/8 in.) rivets, about (5 to 6½) apart.

The reverse angle irons on the floors extend in one length across the middle line ~~from~~ to Bilge Keelson to Gunwale — alternate

,, ,, ,, on the frames ,, ,, ,, ~~from~~ ,, ,, ,, to Intercostal Keelson to 2d Stringer angle iron — alternate

Keelson, how are the various lengths of plates or angle irons connected? By covering pieces, welt & shifted

Plates, Garboard, double ~~or~~ —— rivetted to keel, double ~~or~~ —— at upper edge, with rivets (9/16 × 7/8 ins.) diameter, averaging (4 × 2¾ in.) apart.

,, Edges from Garboards to upper part of bilge, worked clencher, double ~~or single~~ rivetted; with rivets (7/8 in.) diameter, averaging (2¾ ins.) apart.

,, Butts from Keel to turn of bilge, worked carvel with butt straps (13 × 12/16) thick, double ~~or single~~ rivetted; with rivets (7/8 in.) diameter, averaging (2¾ 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 (7/8 in.) diameter, averaging (2¾ 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 to Gunwale angle iron & bulwark plates At lower edge Double

,, Butts from bilge to planksheers, worked carvel with butt straps (11/16 × 10/16) thick, double ~~or single~~ rivetted; with rivets (7/8 in.) diameter, averaging (2¾ ins.) apart. Breadth of laps in double rivetting (5¾ ins.) Breadth of laps in single rivetting (——)

Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? Double — except 4 Dk. Stringer plates which are treble

Planksheer, how secured to the plating of the sides } Explain by sketch if necessary. } Iron Gutter waterway

Waterway ,, ,, planksheer and to the Beams

Deck Beams, how secured to the side? By welded knee plates 28 & 30 & rivetted to the frames.

Hold or Lower Deck ditto 4th ,, ,, ,, 28 & 30 ,, ,, ,, ,,

Paddle ,, ,, —— —— —— No. of breasthooks —— crutches ——

What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.? Plates — Clough Hall

Manufacturer's name or trade mark (Kinnersley's), Beams Butterley Co., Angle irons — Consett

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

Builder's Signature G. R. Laver & Co. *Surveyor's Signature* E. Wheeler

© 2018 Lloyd's Register Foundation
IRON44-0480

6030 Iron.

Workmanship. Are the lands or laps of the clenchwork 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 fay 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? Single pieces

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? Well Countersunk

Are there any rivets which either break into or have been put through the seams or butts of the plating? No - any

---

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.*

Foremast (Iron) 81-0 × 2-6 dia 2 plates in circumference 6/16 7/16 thick - 4 Angle Irons 4 × 3 × 5/16
Main " 84-6 × 2-6 " 2 " " " 6/16 × 7/16 " 4 " " 4 × 3 × 5/16
Mizen " 76-0 × 2-0 " 2 " " " 5/16 6/16 " 4 " " 3 × 3 × 5/16
Bowsprit 40-0 × 2-6 " 2 " " " 7/16 × 8/16 " 6 " " 5 × 3 × 5/16
Iron { Fore, Main & Cross Jeff Yards 2 " " " 5/16 × 6/16 " 3 " 3 × 3 × 6/16
Fore, Main & Mizen Lower & Topsail Yards 2 " " " 4/16 × 5/16 " 3 " " 3 × 3 × 6/16
Topmasts Pitch Pine, Topsail & Top gallant Yards Pitch Pine & other Spars of Spruce
Jib boom 8 " "

Seams Single rivetted & butts double - except in bras of partners & sleys. where they are treble. The butt straps of Masts & Bowsprit are fitted on the outside.

No.	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.	W'ght req'd per Rule.	Test req'd per Rule.
1 Set	Fore Sails,	Chain	150	1 13/16	59.2	1 13/16	59.2	Bowers	Marked on Anchors 2770	32.3.15	30.15.3	32.0.—	30.2.—
			Lloyd's	Netherton & Co	No. 3783	Nov 22/67				Lloyd's	Netherton & Co	No. 2770	Nov 30/67
	Fore Top Sails,		150	1 13/16	59.2	1 13/16	59.2	1 Do	2768	32.3.4	30.14.2	32.0	30.2.—
			Lloyd's	Do	No. 3904	Nov 22/67				Lloyd's	Do	No. 2768	Nov 30/67
	Fore Topmast Stay Sails	Hempen Stream Cable	90	1	—	—	—	1 Do	2769	27.0.0	26.11.1	27.0.22	26.11.—
	Main Sails,	Hawser	90	12	—	10	—	Stream		Lloyd's	Do	No. 2769	Nov 30/67
	Main Top Sails,	Towlines	90	10½	—	9½	—			13.0.4	with Stock	13.0.0	
		Warp	90	6½	—	6½	—	2 Kedges	—	6.2.26	" "	6.2.0	
and		All of Best quality.								3.1.12	" "	3.1.0	

Mr Wade Surveyor

Mr Wade Surveyor

Her Standing and Running Rigging Wire & hemp sufficient in size and Best in quality.

She has One Long Boat and Three others

The present state of the Windlass is Good Capstans Good and Rudder Good Pumps Main & Bilge (Iron) Patent & in Fore Compartment

---

Order for Special Survey No. 448 Date 6/9/67

Order for Ordinary Survey No. ____ Date ____

DATES of Surveys held while building as per Section 18.

1st. On the several parts of the frame, when in place, and before the plating was wrought During the
2nd. On the plating during the progress of rivetting whole time of Building
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 & fitting out
5th. After the ship was launched

State if she has a Spar Deck No — Poop Yes - 52-6 long or Forecastle Yes - 35-6 long

General Remarks,

This Vessel is well built - the three upper strakes of outside plating are fitted in accordance with the Sketch appended (sanctioned by the Committee) & similar to the Ship "Bacchus" - please see Report No. 20847.

An additional frame for one half the Vessel's length Amidships is fitted at the opposite sides of each floor plate across the keel, extending to the upper part of bilges; & the butts of the floor plates are treble rivetted.

A deck house 28-6 × 14-6 is fitted between the Fore-mast & Main mast for Galley, Crew Space &c.

In what manner are the surfaces preserved from oxidation? Inside Portland Cement & Cotton & paint above
Ditto ditto Outside Composition & Cotton & paint above

I am of opinion this Vessel should be Classed ✠A I

The amount of the Fee .....£ 5 : : is received by me,
Special .....£ 66 : 8 : : 2/2/68
Certificate (if required) .....£ Gratis

E. Wheeler

Committee's Minute Liverpool 21st February 1868

Character assigned A 1 Built under Special Survey
A.T.C.P. Cm. 68

Bacchus 21.110

© 2019 Lloyd's Register Foundation