3709

IRON SHIPS.

Rec 27/8/64

No 2389 **Survey held at** Middlesbro **Date** 26th Aug. **18**64

on the Screw Steamer "Baira" **Master**

Tonnage Gross 572 69/100 **Engine Room** 136 56/100 **Register** 436 13/100 **Built at** Middlesbro

When Built 1864 **Launched** 6th August **By whom built** Backhouse & Dixon

Owners Chapple Dutton & Co **Port belonging to** Liverpool **Destined Voyage** Mediterranean

If Surveyed Afloat or in Dry Dock While building

	Feet.	Inches.		Feet.	Inches.		Feet.	Inches.		Horse.
Length aloft	174	4/10	Extreme Breadth	27	2/10	Depth from top of Upper Deck / Beam to top of Floor	16	3/10	Power of Engines	96

	Inches in Ships.			Inches required per Rule.		
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	21			21		
(Double across keel 4 1/2)	Inches. In Ship.	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	Inches. required per Rule.	16ths required per Rule.
Floors, Size of Angle Iron, and No. one at bottom of Floor Plate	3 1/2	3	7/16	3 3/4	2 3/4	7/16
" depth and thickness of Floor Plate at mid line	17 1/2	8/16	Each 7/16	17 3/4	× 8/16 ×	7/16
" depth and thickness of Floor Plate at Bilge Keelson	8	×	8/16	8	8/16	
" Size of Reversed Angle Iron, and No. one at top of Floor Plate ..	3	2 1/2	6/16	3	2 1/2	6/16
Frames, Size of Angle Iron, single ~~or double~~ ..	3 1/2	3	7/16	3 3/4	2 3/4	7/16
" " Reversed Iron, if to every frame or every other frame	3	2 1/2	6/16	3	2 1/2	6/16
Beams, Deck (No. 53) ~~double Angle Iron, Plate, or~~ Bulb Iron	7	×	7/16	7	×	7/16
" " double ~~or single~~ Angle Iron, on top edge	2 1/2	2 1/2	5/16	2 1/2	2 1/2	5/16
" " average space between	42 Inches			42 Inches		
" ~~" if wood (No.) sided & moulded~~						
" Hold, or Lower Deck (No. 29) ~~double Angle Iron, Plate, or~~ Bulb Iron	7	×	7/16	7	×	7/16
" " double ~~or single~~ Angle Iron on top edge	3	2 1/2	6/16	2 1/2	2 1/2	5/16
" " average space between	Second & fourth frames			Second & fourth frames		
" ~~" if wood (No.) sided & moulded~~						
" ~~Paddle, wood, sided and moulded,~~ or ~~if Iron, size of Plate~~						
" ~~Engine " " " "~~						
Keelson, single plate, ~~box, or intercostal~~						
" Size of Plates	12	×	10/16	12	×	10/16
" Size of Angle Irons ..... Four	4	3	8/16	4 1/4	3 1/4	7/16
Ditto Bilge (No. Two) Double Ang. Iron	4	3	8/16	4 1/4	3 1/4	7/16

	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	16ths required per Rule.
Stem, if bar iron, moulding and thickness	7	2 1/2	7	2 1/2
" if plate iron, breadth and thickness				
Stern-post, if bar iron, moulding and thickness	8 1/2	4 10/16	7	5
" " if plate iron, breadth and thickness				
Keel, if bar iron, depth and thickness	7	2 1/2	7	2 1/2
" if plate iron, breadth and thickness				
Garboard Plates, Breadth and thickness	30	10/16	30	10/16
From Garboard to upper part of Bilge		9/16		9/16
From upper part of Bilge to Sheerstrakes		8/16		8/16
Sheerstrakes, Breadth and thickness	29	10/16	30	9/16
Butt Straps to outside plating, Breadth and thickness	9×	10/16	9/16 8/16 7/16	8/16 9/16 9/16 9/16 7/16
~~Planksheers~~				
Gunwale Plate or Stringer on ends of Up. Dk Beams	20	8/16	25	8/16
Angle Iron on ditto	4 1/2 ×	3 × 7/16	4 1/4	3 1/4 7/16
Diagonal Tie Plates on Beams	10 1/2	7/16	10 1/2	8/16
Waterway (Gutter)	3 1/2	3 1/2	7/16	
Deck	3 1/2		3 1/2	–
Ceiling in Hold	2 1/2		–	–
Ceiling betwixt Decks	2 1/2 ×	7	–	–
~~Beam Clamps or Spirketting~~				
" ~~Shelf~~				
" Stringer Plates on ends of Hold or Lower Dk Beams	20	8/16	10 3/4	8/16
~~Ceiling between Decks~~ ..				
Stringer or Tie Plates outside Hatchways	10 1/2	7/16	10 1/2	8/16
~~Deck Beam Clamps~~ or ~~Spirketting~~ ..				
" " ~~Shelf~~ ..	4 ×	3 × 8/16	4 1/4	3 1/4 7/16
Stringers in Hold	3			
Deck, Lower				

Description of Iron. Material.

Stockton Iron Works — Stockton Iron Works — Middlesbro Iron — Bolckow & Vaughan — Stockton Iron Works — Three sets — Yellow Pine — Yellow Pine — Battens — Double Angle Irons — Yellow Pine

Deck, Upper, how fastened to Beams with 9/16 bolts from the top.

Bulkheads, No. Three (after one at the height of cabin deck) Thickness of 6/16 plate

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

" how secured to the sides of the ship Double frames & broad knees

~~Knight heads~~, and Hawse ~~Timbers~~ Blocks German Oak

" size of vertical angle iron and their distance apart 3×3×6/16 Frame 30 & 34

The Frames or Ribs extend in one length from Keel to Gunwale rivetted through plates with (3/4 in.) rivets, about (5 in) apart.

The reverse angle irons on the floors extend in one length across the middle line from top of bilge to top of bilge

" " " on the frames " " " from bilge to gunwale on alternate frames

Keelson, how are the various lengths of plates or angle irons connected? Butts of angle irons & plates shifted & keyed & rivetted

Plates, Garboard, double ~~or single~~ rivetted to keel ~~& at upper edge,~~ with rivets (1 ins.) diameter averaging (4/4 in.) from centre to centre of rivet.

" Edges from Garboards to upper part of bilge, worked ~~carvel with a lining piece (in.) thick, or~~ clencher, double ~~or single~~ rivetted; rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre of rivets.

" Butts from Keel to turn of bilge, worked carvel with a lining piece (9+9/16) thick, double ~~or single~~ rivetted; rivets (3/4 in.) diameter, averaging (3 ins) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? no (5/10 in 7/16 plating)

" Edges from bilge to sheerstrake, worked ~~carvel with a lining piece ( ) thick, or~~ clencher, ~~double or~~ single rivetted; rivets (3/4 in.) diameter, averaging (3 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? no

" Edge of Sheerstrake, double ~~or single~~ rivetted? Double

" Butts from bilge to planksheers, worked carvel with a lining piece (9+9/16 + 7/16) thick, double ~~or single~~ rivetted; rivets (3/4 × 5/10 in.) diameter averaging (3 ins.) from centre to centre of rivets. Breadth of laps in double rivetting (4 1/2) Breadth of laps in single rivetting (2 3/4)

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

~~Planksheer, how secured~~ to the plating of the sides / Waterway " " planksheer and to the Beams — *Explain by sketch if necessary.* Gutter waterways.

Deck Beams, how secured to the side? Beam ends turned & knees welded

Hold or Lower Deck " Same as Deck

~~Paddle~~ " "

No. of breasthooks Five crutches Two ~~how are pointers compensated~~?

What description of iron is used for the angle iron and plate iron in the vessel? By Hopkins & Co Middlesbro, Bolckow & Vaughan, Stockton Iron Works

Builder's Signature Backhouse & Dixon

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IRON437A-0140

3709 Jr Parkell

Workmanship. Are the lands or laps of the clenchwork in all cases in breadth at least five (Jr Quarter) times the diameter of the rivets in double rivetted edges and butts, and at least three 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? They do.

Do the fillings between the ribs and plates fill in solid with single pieces, or are they in short lengths of various thicknesses? Solid in one length

Do the holes for rivetting plate to frames, lining pieces, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the outer plate? All through

Are there any rivets which either break into or have been put through the seams or butts of the plating? A few

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Her Masts, Yards, &c., are in Good (of R. & Pine) condition, and sufficient in size and length.

She has SAILS. One suit of Sails

No.		CABLES, &c.	Fathoms.	Inches.	ANCHORS, and their weights.	No.	Weight.
	Fore Sails,	Chain	240	1 1/4	Bower, B. J. Rodgers	3	20.1.21
	Fore Top Sails,	~~Hempen~~ Stream Cable	90	3/4			20.1.21
	Fore Topmast Stay Sails,	Hawser	90	5 1/2	Stream,	1	19.3.0
	Main Sails,	Towlines	90	7 1/2			6.0.0
	Main Top Sails,	Warp	75	3 3/4	Kedge,	2	2.3.0
and		All of Good quality.	25	3 1/2			2.3.14

Her Standing and Running Rigging Wire & Hemp sufficient in size and Good in quality.

She has Two life ~~Long~~ Boats ~~and~~ Gig & Jolly

The present state of the Windlass is Good (Brown & Harfield's Patent) Capstan Two Winches and Rudder Good Pumps Four of Copper & Lead

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General Remarks, Statement and Date of Repairs, extent of corrosion (if any) both internally and externally, and condition of rivets.

DATES of Surveys held while building, as per Section 17.

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 — Special Survey No of order 1809
3rd. When the beams were in and fastened, and before the decks were laid — First Survey 5th February 1864
4th. When the ship was complete, and before the plating was finally coated — Last Survey 26th Aug 1864
5th. After the ship was launched

Has a Raised Deck frames all to the top height. Plating 6/16 single rivetted at edges double at butts. rivets 5/8 spaced 3 in. Beams the same as main deck. Stringers on ends of do. 22×7/16. Angle irons on do. 3½×3×7/16 Flat of deck 3 in. of Pine. Waterways 5×10 R. Pine & of Oak.
Sheerstrakes doubled with 9×7/16 plate for three fourths the vessels length. top edge being flush with upper part of gunwale angle Irons.
Intercostal Keels are fitted on each side of middle line, plates 17×9/16 double angle Irons 4½×3×7/16

P. Backhouse & Dixon

In what manner are the surfaces preserved from oxidation? Flat of hold cemented with Portland cement other parts with two coats of paint

I am of opinion this Vessel should be classed ~~B~~ A 1

The amount of the Fee .....£ 5 : 0 : 0 is received by me, J. W. Gladstone

Aug 1864 Special .....£ 20 : 12 : 0

Certificate (if required) .....£ : :

Committee's Minute 30th August 1864

Character assigned ~~B~~ A 1

Confirmed

I concur in the above Report
29 Aug 1864 J.R.E.

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