

# IRON SHIPS.

No. 2393 Survey held at Stockton Date 14th September 1864  
 on the Ship "City of London" Master

Tonnage Gross 1301.06 Engine Room \_\_\_\_\_ Register 1301.06 Built at Stockton

When Built 1864 Launched 22nd June By whom built Richardson Duck & Co.

Owners Stewart & Douglas Port belonging to Liverpool Destined Voyage \_\_\_\_\_

If Surveyed Afloat in Dry Dock While Building

Length, plott	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse.
<u>41 1/2</u>	<u>5</u>	<u>10</u>	<u>36</u>			<u>2 3/4</u>	<u>5</u>	<u>10</u>		
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	Inches in Ship.	Inches required per Rule.				Stem, if bar iron, moulding and thickness	Inches in Ship.	16ths required per Rule.	Inches in Ship.	16ths required per Rule.
<u>Double angle keel 1 1/2 ft.</u>	<u>21</u>	<u>21</u>				" if plate iron, breadth and thickness	<u>10 1/2</u>	<u>2 1/2</u>	<u>9</u>	<u>3</u>
Floors, Size of Angle Iron, and No. <u>one</u> at bottom of Floor Plate	Inches in Ship.	Inches required per Rule.	16ths required per Rule.			Stern-post, if bar iron, moulding and thickness	<u>10 1/2</u>	<u>2 1/2</u>	<u>9</u>	<u>3</u>
<u>5 3/2</u>	<u>9/16</u>	<u>5 3/2</u>	<u>9/16</u>			" " if plate iron, breadth and thickness				
" depth and thickness of Floor Plate at mid line	<u>2 1/2</u>	<u>11/16</u>	<u>2 1/2</u>	<u>11/16</u>		Keel, if bar iron, depth and thickness	<u>10 1/2</u>	<u>2 3/4</u>	<u>9</u>	<u>3</u>
" depth and thickness of Floor Plate at Bilge Keelson	<u>12</u>	<u>11/16</u>	<u>12</u>	<u>11/16</u>		" if plate iron, breadth and thickness				
" Size of Reversed Angle Iron, and No. <u>one</u> at top of Floor Plate	<u>3 1/2</u>	<u>3</u>	<u>8/16</u>	<u>3 1/2</u>	<u>3</u>	Garboard Plates, Breadth and thickness	<u>24</u>	<u>15/16</u>	<u>36</u>	<u>14/16</u>
Frames, Size of Angle Iron, single or double	<u>5 3/2</u>	<u>9/16</u>	<u>5 3/2</u>	<u>9/16</u>		From Garboard to upper part of Bilge	<u>13/16</u>		<u>13/16</u>	
" " Reversed Iron, if to every frame or every other frame	<u>3 1/2</u>	<u>3</u>	<u>8/16</u>	<u>3 1/2</u>	<u>3</u>	From upper part of Bilge to Sheerstrakes	<u>12/16</u>		<u>12/16</u>	
Beams, Deck (No. <u>60</u> ) double Angle Iron, Plate, or Bulb Iron	<u>9</u>	<u>9/16</u>	<u>9</u>	<u>9/16</u>		Sheerstrakes, Breadth and thickness	<u>11/16</u>	<u>8</u>	<u>11/16</u>	<u>8</u>
" " double or single Angle Iron, on <u>top</u> edge	<u>4</u>	<u>3</u>	<u>6/16</u>	<u>3 3/4</u>	<u>3</u>	Butt Straps to outside plating, Breadth and thickness	<u>10</u>	<u>13/16</u>	<u>13/16</u>	<u>14</u>
" " average space between	<u>3 ft 6 in</u>		<u>3 ft 6 in</u>			Planksheers				
" " if wood (No. ) sided & moulded						Gunwale Plate or Stringer on ends of Up. Dk Beams	<u>36</u>	<u>11/16</u>	<u>30 1/2</u>	<u>11/16</u>
" Hold, or Lower Deck (No. <u>59</u> ) double Angle Iron, Plate, or Bulb Iron	<u>9</u>	<u>9/16</u>	<u>9</u>	<u>9/16</u>		Angle Iron on ditto	<u>5 1/2</u>	<u>4 1/2</u>	<u>9/16</u>	<u>5 1/2</u>
" " double or single Angle Iron, on <u>top</u> edge	<u>4</u>	<u>3</u>	<u>6/16</u>	<u>3 3/4</u>	<u>3</u>	Diagonal Tie Plates on Beams	<u>13 1/2</u>	<u>11/16</u>	<u>13 1/2</u>	<u>11/16</u>
" " average space between	<u>3 ft 6 in</u>		<u>3 ft 6 in</u>			Waterway	<u>13 1/2</u>	<u>11/16</u>	<u>13 1/2</u>	<u>11/16</u>
" " if wood (No. ) sided & moulded						Deck	<u>4</u>		<u>4</u>	
" Paddle, wood, sided and moulded, or if Iron, size of Plate						Ceiling in Hold	<u>3</u>	<u>2 3/4</u>		
" Engine						Ceiling betwixt Decks	<u>7</u>	<u>3 1/4</u>		
Keelson, single plate, box or intercostal	<u>17</u>	<u>11/16</u>	<u>16</u>	<u>14/16</u>		Beam Clamps or Spirketting				
" Size of Plates	<u>15 1/2</u>	<u>4 1/2</u>	<u>9/16</u>	<u>5 1/2</u>	<u>4 1/2</u>	" Shelf				
" Size of Angle Irons	<u>15 1/2</u>	<u>4 1/2</u>	<u>9/16</u>	<u>5 1/2</u>	<u>4 1/2</u>	" Stringer Plates on ends of Hold or Lower Dk Beams	<u>23 1/2</u>	<u>11/16</u>	<u>22 1/2</u>	<u>11/16</u>
Ditto Bilge (No. <u>2</u> ) Double <u>iron</u> <u>from 5 1/2</u> <u>4 1/2</u> <u>9/16</u> <u>5 1/2</u> <u>4 1/2</u> <u>9/16</u>						Ceiling between Decks	<u>13 1/2</u>	<u>11/16</u>	<u>13 1/2</u>	<u>11/16</u>
Transoms, material <u>Plate</u> or, if none, in what manner compensated for.						Stringer or Tie Plates outside Hatchways				
Knight-heads, and Hawse Timbers <u>Blocks Greenheart</u>						Deck Beam Clamps or Spirketting				
The Frames or Ribs extend in one length from <u>Keel</u> to <u>gunwale</u>						" " Shelf				
The reverse angle irons on the floors extend in one length across the middle line from <u>top of bilge</u> to <u>top of bilge</u>						Stringers in Hold	<u>5 1/2</u>	<u>4 1/2</u>	<u>9/16</u>	<u>5 1/2</u>
" " " on the frames " " " from <u>bilge</u> to <u>above hold beam</u>						Deck, Lower	<u>3</u>			
Keelson, how are the various lengths of plates or angle irons connected? <u>both shifted stepped &amp; rivetted</u>						Deck, Upper, how fastened to Beams	<u>11/16</u>		<u>nut bolts from the top</u>	
Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets ( <u>1 1/4</u> ins.) diameter averaging ( <u>5</u> in.) from centre to centre of rivet.						Bulkheads, No. <u>Two</u> Thickness of <u>7/16 plate</u>				
" Edges from Garboards to upper part of bilge, worked <u>carvel</u> with a lining piece ( <u>in</u> ) thick, or clencher, double or single rivetted; rivets ( <u>7/16</u> in.) diameter, averaging ( <u>3 1/2</u> ins.) from centre to centre of rivets.						" how secured to the sides of the ship <u>to single frames &amp; bracket pieces</u>				
" Butts from Keel to turn of bilge, worked <u>carvel</u> with a lining piece ( <u>10 x 1 1/2</u> ) thick, double or single rivetted; rivets ( <u>7/16</u> in.) diameter, averaging ( <u>3 1/2</u> ins.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? <u>no</u>						" size of vertical angle iron and their distance apart <u>3 1/2 x 3 x 9/16 spaced 30 in.</u>				
" Edges from bilge to sheerstrake, worked <u>carvel</u> with a lining piece ( <u>in</u> ) thick, or clencher, double or single rivetted; rivets ( <u>7/16</u> in.) diameter, averaging ( <u>3 1/2</u> in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? <u>no</u>										
" Edge of Sheerstrake, double or single rivetted? <u>Double</u>										
" Butts from bilge to planksheers, worked <u>carvel</u> with a lining piece ( <u>10 x 1 1/2</u> ) thick, double or single rivetted; rivets ( <u>7/16</u> in.) diameter averaging ( <u>3 1/2</u> ins.) from centre to centre of rivets. Breadth of laps in double rivetting ( <u>5</u> ) Breadth of laps in single rivetting ( <u>none</u> )										
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? <u>Double</u>										
Planksheer, how secured to the plating of the sides						Explain by sketch				
Waterway " " planksheer and to the Beams						if necessary.	<u>Gutter waterways, under Poop &amp; Forecastle</u>			
Deck Beams, how secured to the side? <u>Beam ends turned &amp; pieces welded</u>										
Hold or Lower Deck " <u>Same as Deck</u>										
Paddle "										
No. of breasthooks <u>Five</u> crutches <u>Three</u> how are pointers compensated? _____										
What description of iron is used for the angle iron and plate iron in the vessel? <u>By Messrs. Richardson, Duck &amp; Co. Iron Works</u>						Builder's Signature				



# Workmanship.

Are the lands or laps of the clenchwork in all cases in breadth at least five 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 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? *Solid in fore 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*

Her Masts, Yards, &c., are in *Good* condition, and sufficient in size and length.

She has SAILS.

CABLES, &c.

ANCHORS, and their weights.

N<sup>o</sup>.

2 Fore Sails,  
2 Fore Top Sails,  
2 Fore Topmast Stay Sails,  
2 Main Sails,  
2 Main Top Sails,

Chain .....  
Hempen Stream Cable .....  
Hawser .....  
Towlines .....  
Warp .....  
All of *Good* quality.

Fathoms. Inches.  
300 17/10  
90 14/10  
90 9  
90 11  
90 7

Bower, .....  
Stream, .....  
Kedge, .....

N<sup>o</sup>. Weight.  
3 45.1.20  
3 45.3.14  
1 15.3.0  
2 6.3.10  
3 3.0.12

Her Standing and Running Rigging *and others as usual* sufficient in size and *Good* in quality.

She has *One* Long Boat and *Pinnace Life Bie*  
The present state of the Windlass is *Good* Capstan *3 of Iron* and Rudder *Good* Pumps *Two of bin former & one Patent.*

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  
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

*Special Survey No of Order 177 25 July 1864*  
*First Survey 26th Oct 1863*  
*Part Survey 14th Sept 1864*  
Intercoastal Keelson fitted on each side of middle line plates 22" x 1/2" double angle iron 5 1/2 x 4 1/2 x 7/16. Stringer fitted about 6 ft. below hold beams with plates 9 x 0/16, four angle iron 5 1/2 x 4 1/2 x 7/16.  
Was a Poop & Forecastle frames all to the top height. Plating 6/16 the single rivetted at edges double at butts. Poop beams double angle iron 6 x 3 x 7/16 & 5 x 3 x 4/16. Forecastle beams bulb plates 0 x 0/16 double angle iron on top edge 3 x 3 x 6/16. Waterways Teak. Plating of Deck Y. Pine.  
Lower masts of Iron, 7/16 the three angle iron inside 5 x 3 x 0/16 single rivetted at edges double at butts 3/4 rivets spaced 3 in. Bowsprit the same.  
Garboard strakes 12 in less in width than required by Rule. Butts of the same triple rivetted. Steps extending from frame to frame. See Secretary's letter dated 21st Jan'y 1864  
*Richardson, Duck, & Co.*  
*No additional strengthening see Secretary's letter dated 20th July 1863.*  
*Mr. J. P. Martin's recommendations of the 27th Aug'y 1864 have been carried out.*

In what manner are the surfaces preserved from oxidation?

*Flat of hold cemented with Portland cement, lower hold coated with lime white, other parts with paint.*

I am of opinion this Vessel should be classed *12 A1* (See Secretary's letter dated 4th Aug. 1863)

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

Special .....£ 69 : 1 : 0

Certificate (if required) .....£ : : :

Committee's Minute *20th September 1864*

Character assigned *A1 for 12 years*

*This Sailing Ship of Iron appears to be 1817 in my Report dated June last & ship seen building at that time. I am of opinion she is eligible for classification as recommended.*  
*Sept 19/64*  
*MR*