

# IRON SHIP.

Reg 22/4/73 433

12092 Survey held at S. Shields Date, First Survey 21 April 1872 Last Survey 16 June 1873

the "Birling" Yard Number 23 Master John Smith Built at S. Shields

AGE under Deck } 254.62  
of Third Spar, }  
of Poop, } 84.16  
of House } 1.61  
of Forecastle } 19.20  
Tonnage } 359.59  
Crew Space } 18.34  
Engine Room } 341.25  
ster Tonnage } 146.53  
out on Beam } 194.72

ONE, OR TWO DECKED, THREE DECKED VESSEL.  
~~SPAR, OR AWNING DECKED VESSEL.~~  
HALF BREADTH (moulded) ... .. 11.0  
DEPTH from upper part of Keel to top of Upper Deck Beams ... .. 12.10  
GIRTH of Half Midship Frame (as per Rule) ... .. 21.1  
1st NUMBER ... .. 44.9  
1st NUMBER, if ~~THREE DECKED VESSEL~~  
deduct 7 feet ... .. 140  
LENGTH ... .. 62.86  
2nd NUMBER ... .. 6.3  
PROPORTIONS—Breadths to Length ... .. 10.8  
Depths to Length—Upper Deck to Keel ... ..  
Main Deck ditto ... ..

When built 1872 Launched 19<sup>th</sup> September  
By whom built J. Coltingham  
Owners Joseph Brown & Co  
Port belonging to London  
Destined Voyage Rouen  
If Surveyed while Building, Afloat, or in Dry Dock.

LENGTH of deck as Rule ... 140 0 BREADTH—Moulded ... 22 0 DEPTH top of Floors to Upper Deck Beams ... 11 10 Power of Engines ... 46 Horse. N° of Decks with flat laid one N° of Tiers of Beams one

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness ... ..	<u>7 + 1 5/8</u>	<u>7 + 1 5/8</u>
KEEL, moulding and thickness ... ..	<u>6 1/2 + 1 5/8</u>	<u>6 1/2 + 1 5/8</u>
KEEL-POST for Rudder do. do. ... ..	<u>6 x 3</u>	<u>6 1/4 x 3 1/4</u>
for Propeller ... ..	<u>6 1/4 x 3 1/2</u>	<u>6 1/4 x 3 1/4</u>
Distance of Frames from moulding edge to moulding edge, all fore and aft ... ..	<u>21</u>	<u>21</u>
FRAMES, Angle Iron, for 3/4 length amidships ... ..	<u>3 2 1/2 5</u>	<u>3 2 1/2 5</u>
Do. for 1/2 at each end ... ..	<u>3 2 1/2 4</u>	<u>3 2 1/2 4</u>
REVERSED FRAMES, Angle Iron ... ..	<u>2 1/4 2 1/4 4</u>	<u>2 1/4 2 1/4 4</u>
BEAMS, depth and thickness of Floor Plate at mid line for half length amidships ... ..	<u>12 x 6</u>	<u>12 x 6</u>
thickness at the ends of vessel ... ..	<u>5</u>	<u>5</u>
depth at 3/4 the half bdth. as per Rule ... ..	<u>24</u>	<u>24</u>
height extended at the Bilges ... ..	<u>6 3 6</u>	<u>6 3 6</u>
BEAMS, Upper, Spar, or Awning Deck } Angle or double Ang. Iron, Plate or Tee Bulb Iron } Angle or double Angle Iron on Upper edge } Average space ... ..	<u>6 3 6</u>	<u>6 3 6</u>
BEAMS, Main or Middle Deck } Angle or double Ang. Iron, Plate or Tee Bulb Iron } Angle or double Angle Iron on Upper Edge } Average space ... ..	<u>6 3 6</u>	<u>6 3 6</u>
BEAMS, Lower Deck, Hold or Orlop } Angle or double Ang. Iron, Plate or Tee Bulb Iron } Angle or double Angle Iron on Upper Edge } Average space ... ..	<u>6 3 6</u>	<u>6 3 6</u>
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates ... ..	<u>15 x 5</u>	<u>15 x 5</u>
" Rider Plate ... ..	<u>4 x 7</u>	<u>5 1/2 x 5</u>
" Bulb Plate to Intercoastal Keelson ... ..	<u>3 3 6</u>	<u>3 3 6</u>
" Angle Irons ... ..	<u>3 3 6</u>	<u>3 3 6</u>
" Double Angle Iron Side Keelson ... ..	<u>3 3 6</u>	<u>3 3 6</u>
" Side Intercoastal Plate ... ..	<u>3 3 6</u>	<u>3 3 6</u>
" do. Angle Irons ... ..	<u>3 3 6</u>	<u>3 3 6</u>
" Attached to outside plating with angle iron ... ..	<u>3 3 6</u>	<u>3 3 6</u>
BILGE Angle Irons ... ..	<u>3 3 6</u>	<u>3 3 6</u>
" do. Bulb Iron ... ..	<u>3 3 6</u>	<u>3 3 6</u>
" do. Intercoastal plates riveted to plating for length ... ..	<u>3 3 6</u>	<u>3 3 6</u>
BILGE STRINGER Angle Irons ... ..	<u>3 3 6</u>	<u>3 3 6</u>
Intercoastal plates riveted to plating for length ... ..	<u>3 3 6</u>	<u>3 3 6</u>
SIDE STRINGER Angle Irons ... ..	<u>3 3 6</u>	<u>3 3 6</u>

	Inches in Ship.	16ths. In Ship.	Inches required	16ths required
Flat Keel Plates, breadth and thickness ... ..	<u>32</u>	<u>4</u>	<u>30</u>	<u>4</u>
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied ... ..	<u>32</u>	<u>5</u>	<u>30</u>	<u>5</u>
from up. part of Bilge to Ir. edge of Sh'rstrake Main Sheerstrake, breadth and thickness of doubling at Sh'rstrake, & length applied from Main to Upper or Spar Dk. Sh'rstrake. Upper or Spar Dk. Sh'rstrake, breadth & thickness ... ..	<u>32</u>	<u>5</u>	<u>30</u>	<u>5</u>
Butt Straps to outside plating, breadth & thickness Lengths of Plating ... ..	<u>8 5/8</u>	<u>5 1/2</u>	<u>8 5/8</u>	<u>5 1/2</u>
Shifts of Plating, and Stringers ... ..	<u>2</u>	<u>"</u>	<u>"</u>	<u>"</u>
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness ... ..	<u>2 8</u>	<u>6</u>	<u>2 8</u>	<u>6</u>
Angle Iron on ditto ... ..	<u>3 x 3 x 6</u>	<u>6</u>	<u>3 x 3 x 6</u>	<u>6</u>
Tie Plates fore and aft, outside Hatchways Diagonal Tie Plates on Beams No. of Pairs, Planksheer material and scantling ... ..	<u>6 1/2</u>	<u>6</u>	<u>6 1/2</u>	<u>6</u>
Waterways do. do. ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Flat of Upper Deck do. do. ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
How fastened to Beams ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness ... ..	<u>3 x 3 x 6</u>	<u>6</u>	<u>3 x 3 x 6</u>	<u>6</u>
Is the Stringer Plate attached to the outside plating? ... ..	<u>Yes</u>			
Angle Irons on ditto, No. ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Tie Plates, outside Hatchways ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Diagonal Tie Plates on Beams, No. of pairs Waterways materials and scantlings ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Flat of Middle Deck do. do. ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
How fastened to Beams ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Is the Stringer Plate attached to the outside plating? ... ..	<u>Yes</u>			
Angle Irons on ditto, No. ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Stringer or Tie Plates, outside Hatchways Flat of Lower Deck ... ..	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Ceiling between Decks, thickness and material in hold do. do. ... ..	<u>2 1/4</u>	<u>3 3/4</u>	<u>2 1/4</u>	<u>3 3/4</u>
Main piece of Rudder, diameter at head do. at heel ... ..	<u>2 1/4</u>	<u>2 1/4</u>	<u>2 1/4</u>	<u>2 1/4</u>
Can the Rudder be unshipped afloat? <u>Yes.</u> Bulkheads No. <u>4</u> Thickness of <u>4/16</u> Height up <u>upper deck</u> How secured to sides of ship <u>double plates</u> Size of Vertical Angle Irons <u>2 1/4 x 2 1/4 x 1/2</u> and distance apart <u>30</u> ins. Are the outside Plates doubled two spaces of Frames in length? <u>Yes.</u>				

The FRAMES extend in one length from Keel to gunwale Riveted through plates with 5/8 in. Rivets, about 5 apart.  
The REVERSED ANGLE IRONS on floors and frames extend from middle line to upper turn of bilges in and to the Engine room alternately  
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 7/8 in. diameter, averaging 4 1/4 ins. from centre to centre. Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 5/8 in. diameter, averaging 2 1/2 ins. from centre to centre. Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 5/8 in. diameter averaging 2 1/2 ins. from centre to centre. Butts of one Strake at Bilge for 1/2 length, double riveted with Butt Straps 1/8 thicker than the plates they connect. Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 5/8 in. diameter, averaging 2 1/2 ins. from centre to centre. Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 2 1/2 ins. from centre to centre. Edges of Main Sheerstrake, double and single riveted. Upper Sheerstrake, double or single riveted. Butts of Upper or Spar Sheerstrake, treble riveted. Butts of Main Sheerstrake, double riveted, for length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length amidships. Butts of Main Stringer Plate, treble riveted for length amidships. Breadth of laps of plating in single riveting 2 1/4 Breadth of laps of plating in double riveting 4 1/2 Riveted? double riveted  
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double riveted  
Waterway, how secured to Beams riveted (Explain by Sketch, if necessary)  
How secured to the sides? by bracket plates riveted No. of Breasthooks, 4  
Description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? plates and  
Manufacturer's name or trade mark, John Elliott & the plating firm Palmer & Co., London

The above is a correct description.  
Builder's Signature, J. Coltingham Surveyor's Signature, J. P. Head

and in the hold as they order as to the gunwale on every side of frame.



**Workmanship.** Are the butts of plating planed or otherwise fitted? *Chipped and filed*  
 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? *Solid single pieces*  
 Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *fairly so.*  
 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? *a few.*

Masts, Bowsprit, Yards, &c., are *wood* 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 *✓*

*11264 Iron*

No. of Sails	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	No.	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
	Fore Sails,	Chain ...	180	1 1/8	20.6.0.0	1	100.0.0	Bowers ...	2	7.1.7	9.11.2.7	7.1.0	9.9.0
	Fore Top Sails,	(Machine where Tested, date, and name of Superintendent.)						(Machine where Tested, date, and name of Superintendent.)					
	Fore Topmast Stay Sails	Hempen Stream Cable	60	1 1/8				with ...					
	Main Sails,	Hawser ...	90	1 1/8				Stream		2.2.14		2.3.0	
	Main Top Sails,	Towlines ...	90	5/8				with ...		1.1.14		1.1.0	
		Warp quality good	90	4/8				Kedges					

Standing and Running Rigging *hemp* sufficient in size and *good* in quality. She has *one* Long Boat and *one other*  
 The Windlass is *good* Capstan *good* and Rudder *good* Pumps *good and sufficient*  
**Engine Room Skylights.**—How constructed? *solid shutters & bulwarks* How secured in ordinary weather? *bolted down*  
 What arrangements for deadlights in bad weather? *Tapanlius*  
**Coal Bunker Openings.**—How constructed? *cast iron* How are lids secured? *by studs* Height above deck? *2"*  
**Scuppers, &c.**—What arrangements for clearing upper deck of water, in case of shipping a sea? *three ports & mooring-pipes on each side.*  
**Cargo Hatchways.**—How formed? *iron comings & head ledges riveted together.*  
 State size **Main Hatch** *17.6 x 9.0* **Forehatch** *5.0 x 9.0* **Quarterhatch** *10.6 x 6.6*  
 If of extraordinary size, state how framed and secured? *two cross beams of lulo iron and double angles*  
 What arrangement for shifting beams? *✓*  
**Hatches,** If strong and efficient? *yes.*

Order for Special Survey No. *264* DATES of  
 Date *9 Dec 1871* Surveys held  
 Order for Ordinary Survey No. — while building  
 Date — as per  
 No. *23* in builder's yard. 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 progress 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,** *This is a one decked vessel with a top gallant fore-castle 15ft long and a poop 70 feet long, at the head of which the Sheer-stake is doubled, the side plating is increased in thickness, and the deck stringer is increased 1 1/2" in width. She is fitted with a water ballast tank before and abaft the engine room, each about 16 feet in length, top plating 4 1/2", flange plates 5 1/8 in thickness, both efficiently constructed, and the main frames doubled in way of flange plate &c.*

~~one, two or three decked vessel, or if spar or ironing decked, and lengths of poop, fore-castle or raised quarter deck, or of double or part double bottom.~~  
 The surfaces preserved from oxidation? Inside *Cement and paint* Outside *by paint & composition.*  
 This Vessel should be Classed *90 A.1.*

Entry Fee ... £ 4 : : : is received by me,  
 Special ... £ 1 : : :  
 Certificate ... : : : :

*R. H. Reed*

*25th April 1873*

*90 A.1*  
*W. H. C.*

*This vessel appears to be ...*  
*90 A.1 as a ...*  
*22/4*

No. 1. Birmingham ...

