

IRON SHIP.

No. 10376 Survey held at Sunderland Date, First Survey 15th August Last Survey 3rd October 1872
 On the Screw Steamer "Mabel" Yard Number 14 Master J. R. Winter

TONNAGE under Deck 633.74 ONE, OR TWO DECKED, THREE DECKED VESSEL.
 Ditto of Third, Spar, or Awning Deck. 50.92 SPAR, OR AWNING-DECKED VESSEL.
 Ditto of Prop. Raised Qr. Dk. 61.13
 Ditto of Houses on Deck 10.66
 Ditto of Forecastle 756.45
 Gross Tonnage 26.00
 Less Crew Space 730.45
 Less Engine Room 242.06
 Register Tonnage 488.39
 as cut on Beam

HALF BREADTH (moulded) 13.45
 DEPTH from upper part of Keel to top of Upper Deck Beams 17.91
 GIRTH of Half Midship Frame (as per Rule) 27.90
 1st NUMBER 59.26
 1st NUMBER, if a THREE-DECKED VESSEL deduct 7 feet 52.26
 LENGTH 198.83
 2nd NUMBER 1178.2
 PROPORTIONS—Breadths to Length 7
 Depths to Length—Upper Deck to Keel 11
 Main Deck ditto —

Built at Sunderland
 When built 1871 Launched 27 Decr 1871
 By whom built Messrs. John Palmer & Co.
 Owners H. Ellis & Sons
 Port belonging to London
 Destined Voyage Black Sea
 If Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule 198 Feet. 10 Inches. BREADTH—Moulded 26 Feet. 11 Inches. DEPTH top of Keel to Upper Deck Beams 17 Feet. 11 Inches. Power of Engines — Horse. No. of Decks with flat laid One No. of Tiers of Beams Two

Dimensions of Ship per Register, length, 199.2 breadth, 27.2 depth, 16.3

	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	$7\frac{1}{2} \times 2\frac{1}{4}$	$7\frac{1}{2} \times 2\frac{1}{4}$				
STEM, moulding and thickness	$7 \times 2\frac{1}{4}$	$7 \times 2\frac{1}{4}$				
STERN-POST for Rudder do. do.	$7\frac{1}{2} \times 4\frac{1}{2}$	$7 \times 4\frac{1}{2}$				
for Propeller	$7\frac{1}{2} \times 4\frac{1}{2}$	$7 \times 4\frac{1}{2}$				
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>22 in</u>	<u>22 in</u>				
FRAMES, Angle Iron, for $\frac{3}{4}$ length amidships	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$				
Do. for $\frac{1}{4}$ at each end	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$				
REVERSED FRAMES, Angle Iron	$3 \times 2\frac{1}{2}$	$3 \times 2\frac{1}{2}$				
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	$17\frac{1}{2} \times 7$	17×7				
thickness at the ends of vessel	9×7	9×7				
depth at $\frac{3}{4}$ the half-bath, as per Rule	9×7	9×7				
height extended at the Bilges	<u>twice midship depth</u>	<u>twice midship depth</u>				
BEAMS, Upper, Spar, or Awning Deck	$6\frac{1}{2} \times 6$	$6\frac{1}{2} \times 6$				
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$				
Single or double Angle Iron on Upper edge	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$				
Average space	<u>alternate frames</u>	<u>alternate frames</u>				
BEAMS, Main or Middle Deck	$6\frac{1}{2} \times 6$	$6\frac{1}{2} \times 6$				
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$				
Single, or double Angle Iron, on Upper Edge	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$				
Average space	<u>alternate frames</u>	<u>alternate frames</u>				
BEAMS, Lower Deck, Hold or Orlop	$6\frac{1}{2} \times 6$	$6\frac{1}{2} \times 6$				
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$				
Single or double Angle Iron on Upper Edge	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$				
Average space	<u>alternate frames</u>	<u>alternate frames</u>				
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	7×7	7×7				
" Rider Plate	7×7	7×7				
" Bulb Plate to Intercoastal Keelson	$7\frac{1}{2} \times 6$	$6\frac{1}{2} \times 6$				
" Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				
" Double Angle Iron Side Keelson	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				
" Side Intercoastal Plate	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				
" do. Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				
" Attached to outside plating with angle iron	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				
BILGE Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				
" do. Bulb Iron	$6\frac{1}{2} \times 6$	$6\frac{1}{2} \times 6$				
" do. Intercoastal plates riveted to plating for length	$6\frac{1}{2} \times 6$	$6\frac{1}{2} \times 6$				
BILGE STRINGER Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				
Intercoastal plates riveted to plating for length	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				
SIDE STRINGER Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$				

	Inches in Ship.	16ths in Ship.	Inches required	16ths required
Flat Keel Plates, breadth and thickness	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
of <u>d'bling</u> at Bilge, or increased thickness, and length applied <u>1 stake</u>	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
fm up. part of Bilge to lr. edge of Sh'rstrake	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
Main Sheerstrake, breadth and thickness	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
Up. <u>Spar</u> Dk Sh'rstrake, brdth & thickness	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
Butt Straps to outside plating, breadth & thickness	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
Lengths of Plating	<u>9 ft 2 in</u>	<u>9 ft 2 in</u>	<u>9 ft 2 in</u>	<u>9 ft 2 in</u>
Shifts of Plating, and Stringers	<u>2 spaces of frames</u>	<u>2 spaces of frames</u>	<u>2 spaces of frames</u>	<u>2 spaces of frames</u>
Gunwale Plate on ends of <u>Awning Spar</u> or Upper Deck Beams, breadth and thickness	<u>40</u>	<u>8</u>	<u>40</u>	<u>8</u>
Angle Iron on ditto	<u>40</u>	<u>8</u>	<u>40</u>	<u>8</u>
Tie Plates fore and aft, outside Hatchways	<u>9</u>	<u>8</u>	<u>9</u>	<u>8</u>
Diagonal Tie Plates on Beams No. of Pairs	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Planksheer material and scantling	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
Waterways do. do.	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
Flat of Upper Deck do. do.	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
How fastened to Beams <u>Galvanised screw bolts and nuts</u>	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
Stringer Plate on ends of Main or Middle Deck	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
Beams, breadth and thickness	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
Is the Stringer Plate attached to the outside plating?	<u>yes</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>
Angle Irons on ditto, No.	<u>24</u>	<u>3</u>	<u>24</u>	<u>3</u>
Tie Plates, outside Hatchways	<u>24</u>	<u>3</u>	<u>24</u>	<u>3</u>
Diagonal Tie Plates on Beams, No. of pairs	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Waterways materials and scantlings	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
Flat of Middle Deck do. do.	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
How fastened to Beams	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
Stringer Plates on ends of <u>Lower Deck, Hold or Orlop</u> Beams	<u>34</u>	<u>7</u>	<u>34</u>	<u>7</u>
Is the Stringer Plate attached to the outside plating?	<u>yes</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>
Angle Irons on ditto, No.	<u>24</u>	<u>3</u>	<u>24</u>	<u>3</u>
Stringer or Tie Plates, outside Hatchways	<u>24</u>	<u>3</u>	<u>24</u>	<u>3</u>
Flat of Lower Deck	<u>30</u>	<u>8</u>	<u>30</u>	<u>8</u>
Ceiling betwixt Decks, thickness and material	<u>2 in Battis fine</u>	<u>2 in Battis fine</u>	<u>2 in Battis fine</u>	<u>2 in Battis fine</u>
in hold do. do.	<u>2 in Battis fine</u>	<u>2 in Battis fine</u>	<u>2 in Battis fine</u>	<u>2 in Battis fine</u>
Main piece of Rudder, diameter at head	<u>22</u>	<u>4</u>	<u>22</u>	<u>4</u>
do. at heel	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
Can the Rudder be unshipped afloat?	<u>yes</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>
Bulkheads No. <u>4</u> Thickness of <u>5</u> in	<u>4</u>	<u>5</u>	<u>4</u>	<u>5</u>
Height up <u>Upper deck</u>	<u>4</u>	<u>5</u>	<u>4</u>	<u>5</u>
How secured to sides of ship <u>between double frames</u>	<u>4</u>	<u>5</u>	<u>4</u>	<u>5</u>
Size of Vertical Angle Irons <u>3</u> x <u>3</u> x <u>1/16</u> and distance apart <u>30</u> ins.	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
Are the outside Plates doubled two spaces of Frames in length?	<u>yes</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>

Transoms, material. Knight-heads. Hawse Timbers. Iron

Windlass Gyack & Sons Pall Bitt Iron

The FRAMES extend in one length from Keel to Gunwale Riveted through plates with 3/4 in. Rivets, about 5 1/2 apart.

The REVERSED ANGLE IRONS on floors and frames extend near middle line to Stringer in Hold and to Gunwale 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 1 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 3/4 in. diameter, averaging 3 1/2 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/2 ins. from centre to centre.

Butts of 2 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 3/4 in. diameter, averaging 3 1/2 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/2 ins. from cr. to cr.

Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.

Butts of Main Sheerstrake, treble riveted for — length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 1/2 length amidships.

Butts of Main Stringer Plate, treble riveted for — length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 1/2 length.

Breadth of laps of plating in double riveting 4 3/4 Breadth of laps of plating in single riveting 3 1/4

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double & treble

Waterway, how secured to Beams Gutter (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? Curved down ends No. of Breasthooks, 4 Crutches, 3 Transoms

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Richardson & Sons, and angles

Manufacturer's name or trade mark, by Hopper Radcliffe & Co. Fence Houses

The above is a correct description.

Builder's Signature, John Munn

Surveyor's Signature, James Wilson

Lloyd's Register Foundation

10628 *Br* *Planned*
Workmanship. Are the butts of plating planed or otherwise fitted? *Planned*

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 with single pieces*
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *Yes*
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 *of 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

NUMBER for EQUIPMENT <i>10800</i>		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.
<i>Complete</i> No.	SAILS.	<i>240</i>		<i>14</i>	<i>28</i>	<i>20</i>	<i>(Machine where Tested, date, and name of Superintendent.)</i> <i>W.T.C. John Hartness Superintendent</i> <i>checked W.T.C. John Hartness Superintendent</i>	<i>1</i>	<i>14.1.14</i>	<i>15.19.0.7</i>	<i>12.0.0</i>	<i>13 1/2</i>
	Fore Sails,	<i>W.T.C. John Hartness Superintendent</i>						<i>1</i>	<i>14.0.0</i>	<i>15.12.2.0</i>	<i>12.0.0</i>	<i>12 1/2</i>
	Fore Top Sails,	<i>90</i>		<i>6 1/2</i>				<i>1</i>	<i>11.2.14</i>	<i>13.10.0.0</i>	<i>10.0.23</i>	<i>12 1/2</i>
	Fore Topmast Stay Sails	<i>45</i>		<i>13 1/2</i>				<i>1</i>	<i>7.0.0</i>		<i>5.0.0</i>	
	Main Sails,	<i>15</i>		<i>14 1/2</i>				<i>1</i>	<i>3.0.0</i>		<i>2.2.0</i>	
	Main Top Sails,	<i>90</i>		<i>8 1/2</i>				<i>1</i>	<i>1.1.2</i>		<i>1.1.0</i>	
and		<i>90</i>		<i>4 1/2</i>			Kedges ...					

Standing and Running Rigging *Wire & Hemp* sufficient in size and *good* in quality. She has *One* Long Boat and *two* others

The Windlass is *good* Capstan *—* and Rudder *good* Pumps *Metal & good*

Engine Room Skylights.—How constructed? *Wood framing* How secured in ordinary weather? *With shutters*

What arrangements for deadlights in bad weather? *Shutters with thick glass (circular)*

Coal Bunker Openings.—How constructed? *Iron Shells* How are lids secured? *Iron bars* Height above deck? *13 in*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *3 Ports & 3 Scuppers on each side*

Cargo Hatchways.—How formed? *Iron plate coverings & Headledges*

State size Main Hatch *22 ft x 10 ft x 24 in* Forehatch *7 1/2 ft x 6 ft x 24 in* Quarterhatch *11 ft x 7 1/2 ft*

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams? *A shifting Carling in Main Hatchway*

Hatches, If strong and efficient? *Yes*

Order for Special Survey No. *2339* DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought *1871 Aug 12-30*
Date *31st October '71* Surveys held 2nd. On the plating during the progress of riveting *1871 Aug 12-30*
Order for Ordinary Survey No. *—* while building 3rd. When the beams were in and fastened, and before the decks were laid *1871 Aug 12-30*
Date *—* as per 4th. When the ship was complete, and before the plating was finally coated or cemented *1871 Aug 12-30*
No. *114* in builder's yard. Section 18. 5th. After the ship was launched and equipped *1871 Aug 12-30*

General Remarks,

This vessel has a raised quarter deck about 60 feet in length; a sunk Forecastle about 18 ft in length, & a Hurricane deck extending from the break forward about 43 feet; covering in the Engine room & Boiler space; Mr. Maymott's recommendation with regard to the overlapping of the stringer plates &c. have been complied with, excepting the doubling of the Sheerstrake, which has been compensated for by an additional stringer between decks.

A Ballast-tank is fitted in the fore hold about 37 feet in length, & one in the after hold about 43 feet in length, constructed in the usual manner with longitudinal girders; the reverse bars are not cut-off, in this case, but the space between the reverse bars & frame angles are filled in with short-pieces of malleable Iron, with angle Lion collars fitted round the frames, & rivetted through the shell plating, to receive the side plates of the tank top.

State if *one*, two or three decked vessel, or if *open* or *canning* decked, and lengths of poop, forecastle or raised quarter deck, or of double or part double bottom.

How are the surfaces preserved from oxidation? Inside *Portland Cement to upper turn* Outside *3 coats of paint*

I am of opinion this Vessel should be Classed *GOA 1st class* and paint above

The amount of the Entry Fee ... £ *5* : : : is received by me,

Special ... £ *36* : *10* : :

Certificate ... : : :

(Travelling Expenses) *En May this Builders paid special fee for 600 tons this has been repaid & the difference will appear on the monthly fee return*
(if any) £ *—*

Committee's Minute *11th Decr 1872*

Character assigned *GOA 1*

IBU After

Equipment 1870