

# IRON SHIP.

No. 10376 Survey held at Sunderland Date, First Survey 15<sup>th</sup> August Last Survey 3<sup>rd</sup> 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. }  
 Ditto of Peep, or Raised Qr. Dk. } 50.92 DEPTH from upper part of Keel to top of Upper Deck Beams 17.91  
 Ditto of Houses on Deck } 61.13 GIRTH of Half Midship Frame (as per Rule) 27.90  
 Ditto of Forecastle } 10.66 1st NUMBER 5926  
 Gross Tonnage 756.45 1st NUMBER, if a THREE-DECKED VESSEL deduct 7 feet  
 Less Crew Space 26.00 LENGTH 198.83  
 Less Engine Room 730.45 2nd NUMBER 11782  
 Register Tonnage as cut on Beam } 488.39 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.

Official Number

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

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  $\frac{3}{4}$  in. Rivets, about  $5\frac{1}{2}$  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  $\frac{1}{2}$  in. diameter, averaging  $4\frac{1}{4}$  ins. from centre to centre.  
 Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets  $\frac{3}{4}$  in. diameter, averaging  $4\frac{1}{2}$  ins. from centre to centre.  
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets  $\frac{3}{4}$  in. diameter averaging  $3\frac{1}{2}$  ins. from centre to centre.  
 Butts of 2 Strakes at Bilge for  $\frac{1}{2}$  length, treble riveted with Butt Straps  $\frac{1}{16}$  thicker than the plates they connect.  
 Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets  $\frac{3}{4}$  in. diameter, averaging  $3\frac{1}{2}$  ins. from cr. to cr.  
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets  $\frac{3}{4}$  in. diameter, averaging  $3\frac{1}{2}$  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  $\frac{1}{2}$  length amidships.  
 Butts of Main Stringer Plate, treble riveted for — length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for  $\frac{1}{2}$  length.  
 Breadth of laps of plating in double riveting  $4\frac{3}{4}$  Breadth of laps of plating in single riveting  $3\frac{1}{4}$

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, 391 transom  
 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 Mumford Surveyor's Signature, James Gibson

Lloyd's Register Foundation

12 ON 452 - 0222

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		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.
No. <i>Complete due</i>	SAILS.	240	14	28 20	210	1 3/16	Bowers ...	1	44.1.14	15.19.0.7	12.0.0	13 1/2
	Fore Sails,						(Machine where Tested, date, and name of Superintendent.)	1	44.0.0	15.12.0.0	12.0.0	12 1/2
	Fore Top Sails,						checked <i>W.T.C. John Hartness Superintendent</i>	1	71.2.14	13.10.0.0	10.0.0	12 1/2
	Fore Topmast Stay Sails						Stream ...	1	7.0.0		5.0.0	
	Main Sails,						Kedges ...	1	3.0.0		2.2.0	
	Main Top Sails,							1	1.1.2		1.1.0	
CABLES, &c.												
Chain ...												
Hempen Stream Cable		90	6 1/2									
Hawser Chain		45	1 3/4									
Towlines		15	1 1/2									
Warp ...		90	4 1/2									
quality		90	4 1/2									

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 Shroofs How are lids secured? Iron bars Height above deck? 13 ins  
**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 7.4 x 6 ft x 24 in Quarterhatch 11 ft x 7.8  
 If of extraordinary size, state how framed and secured?  
 What arrangement for shifting beams? A shifting ceiling 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 Build under 200 ft  
 Date 31<sup>st</sup> October '74 Surveys held 2nd. On the plating during the progress of riveting Surveyed 1871 Aug 17, 23, 30 Sep 2, 9, 12, 15, 18, 20, 22, 25, 27, 28, 29 Oct 1, 2, 3, 4, 7, 10, 13, 16, 18, 21, 23, 26 Nov 1, 3, 4, 10, 11, 15, 18, 21  
 Order for Ordinary Survey No. — while building 3rd. When the beams were in and fastened, and before the decks were laid —  
 Date — as per 4th. When the ship was complete, and before the plating was finally coated or cemented 23, 24, 27, 28 Dec 5, 9, 12, 13, 14, 16, 17, 22  
 No. 114 in builder's yard. Section 18. 5th. After the ship was launched and equipped 23, 27, 7, 12 Jan 3, 10, 16, 19, 22 Feb 1, 6, 12, 29 Feb 26, 4, 7, 11, 25 Feb 14, 15 Oct 3.

**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 beam 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 Iron collar fitted round the frames, & riveted 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 casing~~ 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 tiers 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 : : W.H.  
 Certificate ... : : :  
 (Travelling Expenses) En May this Builders paid special fee for 608 tons but has been repaid & the difference will appear on the next months fee return  
 (if any) £ —  
 Committee's Minute 11<sup>th</sup> Decr 18 72  
 Character assigned GOA 1  
IBU A 1st  
 Equipment 1870