

# IRON SHIPS.

No. 8098 Survey held at Sunderland Date April 28 1864  
 on the Steamer "Phames" Master J. M. J.  
 Tonnage Gross 1376 <sup>13</sup>/<sub>100</sub> Engine Room 286 <sup>28</sup>/<sub>100</sub> Register 10.9 <sup>10</sup>/<sub>100</sub> Built at Sunderland  
 When Built 1863-4 Launched April 27 1864 By whom built Messrs. Oswald & Co.  
 Owners Messrs. J. & W. D. Porter & Co. Port belonging to London Destined Voyage Montreal  
 If Surveyed Afloat or in Dry Dock Whit building

Length aloft	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse.
24	7		32	3		25	3		170	
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	Inches in Ships.		Inches required per Rule.		Inches in Ships.		Inches required per Rule.		Inches in Ships.	
	21		21						9 3 1/2	
Floors, Size of Angle Iron, and No. <u>one</u> at bottom of Floor Plate	Inches in Ship.		Inches in Ship.		Inches in Ship.		Inches in Ship.		Inches in Ship.	
	4 1/4 3 1/4		8 1/2		4 1/2 3		9 1/2		9 1/2 5 7 1/2 6	
„ depth and thickness of Floor Plate at mid line	24		9 1/2		24		9 1/2		9 1/2 4 1/2 7 1/2 6	
„ depth and thickness of Floor Plate at Bilge Keelson	8		9 1/2		4 1/2		9 1/2		9 1/2 3 7 1/2 3	
„ Size of Reversed Angle Iron, and No. <u>one</u> at top of Floor Plate	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Frames, Size of Angle Iron, single or double	4 1/4 3 1/4		9 1/2 4 1/2		3 3		7 1/2		9 1/2 3 7 1/2 3	
Reversed Iron, <u>to every frame</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Beams, Deck (No. <u>55</u> ) double Angle Iron,	8		9 1/2		8		9 1/2		9 1/2 3 7 1/2 3	
„ „ double or single Angle Iron,	3 3		4 1/2 3		3 3		4 1/2		9 1/2 3 7 1/2 3	
„ „ average space between	3-6		3-6						9 1/2 3 7 1/2 3	
„ „ if wood (No. <u>34</u> ) sided & moulded	8		9 1/2		8		9 1/2		9 1/2 3 7 1/2 3	
„ Hold, or Lower Deck (No. <u>34</u> )	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
„ „ double or single Angle Iron	3 3		4 1/2 3		3 3		4 1/2		9 1/2 3 7 1/2 3	
„ „ average space between	3-6		3-6						9 1/2 3 7 1/2 3	
„ „ if wood (No. <u>34</u> ) sided & moulded	8		9 1/2		8		9 1/2		9 1/2 3 7 1/2 3	
„ Paddle, wood, sided and moulded, or	3 3		4 1/2 3		3 3		4 1/2		9 1/2 3 7 1/2 3	
„ if Iron, size of Plate	3-6		3-6						9 1/2 3 7 1/2 3	
„ Engine	18x18		16x10 1/2						9 1/2 3 7 1/2 3	
Keelson, single plate, box, or intercostal	18		9 1/2 16x10 1/2		9 1/2				9 1/2 3 7 1/2 3	
„ Size of Plates	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
„ Size of Angle Irons	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Ditto Bilge (No. <u>one</u> )	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Transoms, material <u>iron</u> or, if none, in what manner compensated for.	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Knight-heads, and Hawse Timbers	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
The Frames or Ribs extend in one length from <u>Keel</u> to <u>gunwale</u> rivetted through plates with ( <u>3/4</u> in.) rivets, about ( <u>6</u> in.) apart.	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
The reverse angle irons on the floors extend in one length across the middle line from <u>on every frame</u> to <u>height of Middle deck beam stainer</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Keelson, how are the various lengths of plates or angle irons connected? <u>With butt straps double rivetted</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets ( <u>3/8</u> in.) diameter averaging ( <u>3/4</u> in.) from centre to centre of rivet.	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
„ Edges from Garboards to upper part of bilge, worked carvel with a lining piece ( <u>1/2</u> in.) thick, or clencher, double or single rivetted; rivets ( <u>3/8</u> in.) diameter, averaging ( <u>3/4</u> in.) from centre to centre of rivets.	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
„ Butts from Keel to turn of bilge, worked carvel with a lining piece ( <u>3/8</u> in.) thick, double or single rivetted; rivets ( <u>3/8</u> in.) diameter, averaging ( <u>3/4</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>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
„ Edges from bilge to sheerstrake, worked carvel with a lining piece ( <u>1/2</u> in.) thick, or clencher, double or single rivetted; rivets ( <u>3/4</u> in.) diameter, averaging ( <u>3/4</u> in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? <u>None</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
„ Edge of Sheerstrake, double or single rivetted? <u>Double rivetted</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
„ Butts from bilge to planksheers, worked carvel with a lining piece ( <u>10x9</u> ) thick, double or single rivetted; rivets ( <u>3/4</u> in.) diameter averaging ( <u>3/4</u> in.) from centre to centre of rivets. Breadth of laps in double rivetting ( <u>3/4</u> in.) Breadth of laps in single rivetting ( <u>None</u> )	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? <u>Double rivetted</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Planksheer, how secured to the plating of the sides	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Waterway „ „ planksheer and to the Beams	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Deck Beams, how secured to the side? <u>Turned down and rivetted to frames</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Hold or Lower Deck „	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
Paddle „	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
No. of breasthooks <u>seven</u> crutches <u>four</u> how are pointers compensated? <u>Ends of stringers</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	
What description of iron is used for the angle iron and plate iron in the vessel? <u>Bolehor &amp; Vaughan</u>	3 3		7 1/2 3		3 3		7 1/2		9 1/2 3 7 1/2 3	



**Workmanship.** Are the lands or laps of the cleancut 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? *Five & a half times the diameter*  
 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 with single pieces*  
 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? *Yes*  
 Are there any rivets which either break into or have been put through the seams or butts of the plating? *A very few in the butts.*

Her Masts, Yards, &c., are in \_\_\_\_\_ condition, and sufficient in size and length. *3567 fms.*  
 She has **SAILS.** **CABLES, &c.** **ANCHORS, and their weights.**

N <sup>o</sup> .		Fathoms.	Inches.	N <sup>o</sup> .	Weight.
	Fore Sails,	Chain .....			Bower, .....
	Fore Top Sails,	Hempen Stream Cable .....			
	Fore Topmast Stay Sails,	Hawser .....			Stream, .....
	Main Sails,	Towlines .....			
	Main Top Sails,	Warp .....			Kedge, .....
and		All of _____ quality.			

Her Standing and Running Rigging \_\_\_\_\_ sufficient in size and \_\_\_\_\_ in quality.  
 She has \_\_\_\_\_ Long Boat and \_\_\_\_\_  
 The present state of the Windlass is \_\_\_\_\_ Capstan \_\_\_\_\_ and Rudder \_\_\_\_\_ Pumps \_\_\_\_\_

**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 *Built under special survey from Oct 21<sup>st</sup>*  
 2nd. On the plating during the progress of rivetting *Survey from Oct 21<sup>st</sup>*  
 3rd. When the beams were in and fastened, and before the decks were laid *Nov 3 to the present date*  
 4th. When the ship was complete, and before the plating was finally coated *date*  
 5th. After the ship was launched \_\_\_\_\_

The reversed angle irons in this ship were originally extended to the Hold beam and Middle deck stronger angle irons alternately; they have now been continued to the last named height and Spar deck stronger alternately, for a length of 170 feet amidships, in accordance with the Secretary's letter of the 9<sup>th</sup> February 1864.

The side hulls, composed of double angle iron <sup>5 1/2 x 7 1/8 with butt plate between 8 x 9 1/8</sup> double rivetted to the reversed angle iron on the frames, extend from forward to the aft side of Engine room, where they are connected with the Engine bearers; they have now been continued aft, and being connected with the engine room bulkhead by double angle iron 3 x 3 1/2 x 7/8 and well knee, and the Engine room bearer being well secured to the bulkhead the connection is made continuous throughout.

The Spar deck topside is 7/8 thick; the sheer strake being 4 feet broad, and doubled 3/4 the length of ship amidships, with plates 7/8 thick and 2 feet broad. The beams are of Ball iron 6 1/2 x 7 1/8 with double reverse angle iron on upper edge 2 1/2 x 2 1/2 x 7/8. The gunwale stronger plate is 2 1/4 x 7/8 with angle iron 3 1/2 x 3 1/2 x 7/8. See plates on each side of hatchways, fore deck 10 x 7/8, and six pairs of diagonal plates of the same size. There are also five pairs of diagonal to plates to Middle deck 12 x 7/8.

The side hulls are not intercostal as required by the Rules, but in all other respects she is a well built ship, the workmanship being done throughout being satisfactory. I respectfully leave her claims to be classed to the favorable consideration of the Committee.

In what manner are the surfaces preserved from oxidation? *Inside with Portland cement & coats of pitch and from hence upwards with three coats of paint. The outside with three coats of paint and one coat of macech & Sueden's composition.*

I am of opinion this Vessel should be classed \_\_\_\_\_

The amount of the Fee ..... £ 5 : - : - is received by me.

Order No 11688 Special ..... £ 68 : 16 : -

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

Committee's Minute *3<sup>rd</sup> May 1864*

Character assigned *A*

*Ben. Marshall*  
*8/5/64*

We are of opinion the hull of this Iron Steam Steamer, under all the circumstances stated in Report, is entitled to the Committee's favorable consideration to Class *A*, as recommended.

