

IRON SHIPS.

No. 8146 Survey held at Sunderland Date June 16th 1864
 on the B⁴ Master Simpson
 Tonnage Gross 490¹⁰⁰ Engine Room 490¹⁰⁰ Register 490¹⁰⁰ Built at Sunderland
 When Built 1864 Launched 8th June By whom built N. Pile Hay & Co
 Owners Jas Pile & Co Port belonging to London Destined Voyage
 Surveyed Afloat or in Dry Dock Whilst Building

Length aloft 146 5 Feet. 146 5 Inches. Extreme Breadth.... 27 25 Feet. 27 25 Inches. Depth from top of Upper Deck } 18 25 Feet. 18 25 Inches. Beam to top of Floor..... }
 Power of Engines....

	Inches in Ships.			Inches required per Rule.				Inches in Ship.			Inches required per Rule.		
	Inches.	Inches.	16ths.	Inches.	Inches.	16ths.		Inches.	Inches.	16ths.	Inches.	Inches.	16ths.
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	21			21			Stem, if bar iron, moulding and thickness	8	3		6 3/4	2 1/2	
Floors, Size of Angle Iron, and No. / at bottom of Floor Plate.....	3 1/2	3	57	3 1/2	2 3/4	7	„ if plate iron, breadth and thickness....	8	3		6 3/4	2 1/2	
„ depth and thickness of Floor Plate at mid line	19 1/2	15	7	18 3/4		7	Stern-post, if bar iron, moulding and thickness	8	3		6 3/4	2 1/2	
„ depth and thickness of Floor Plate at Bilge Keelson	7	7	7	3 1/2		7	„ „ if plate iron, breadth and thickness	8	3		6 3/4	2 1/2	
„ Size of Reversed Angle Iron, and No. / at top of Floor Plate..	2 5/8	2 5/8	16	2 3/4	2 1/2	6	Keel, if bar iron, depth and thickness.....	8	2		6 3/4	2 1/2	
Frames, Size of Angle Iron, single or double..	3 1/2	3	57	3 1/2	2 3/4	7	„ if plate iron, breadth and thickness....						
„ „ Reversed Iron, if to every frame	2 5/8	2 5/8	16	2 3/4	2 1/2	6	Garboard Plates, Breadth and thickness	31	10	24	10		
„ „ to Hold Beams & every alternate frame in Deck	2 5/8	2 5/8	16	2 3/4	2 1/2	6	From Garboard to upper part of Bilge.....		9		9		
Beams, Deck (No. 42) double Angle Iron, Plate, or Bulb Iron.....	6 1/2	6	6	6 1/2		6	From upper part of Bilge to Sheerstrakes.....		148		148		
„ „ double or single Angle Iron, on upper edge.....	2 1/2	2 1/2	6	2 1/2	2 1/2	5	Sheerstrakes, Breadth and thickness	30	19	24	8 1/2		
„ „ average space between	3/6			3/6			Butt Straps to outside plating, Breadth and thickness	9	16	8 1/4	5 1/16		
„ „ if wood (No.) sided & moulded							Planksheers						
„ Hold, or Lower Deck (No. 33) double Angle Iron, Plate, or Bulb Iron	6 1/2	6	6	6 1/2		6	Gunwale Plate or Stringer on ends of Up. Dk Beams	20	7	20	7		
„ „ double or single Angle Iron on upper edge.....	2 1/2	2 1/2	6	2 1/2	2 1/2	5	Angle Iron on ditto.....	4x3	7	4x3	6		
„ „ average space between	3/6			3/6			Diagonal Tie Plates on Beams	3x2 3/4	6				
„ „ if wood (No.) sided & moulded							Waterway & Sheerstrake	10	7	9 3/4	7		
„ Paddle, wood, sided and moulded, or if Iron, size of Plate							Deck	2 1/2	1	3			
„ Engine „ „ „ „							Ceiling in Hold	2					
Keelson, single plate, box, or intercostal	12 1/2	10	12 1/2		10		Ceiling betwixt Decks	2					
„ Size of Plates on the top.....	6	7					Beam Clamps or Spirketting „ Shelf						
„ Size of Angle Irons	4	3	6	4	3	6	„ Stringer Plates on ends of Hold or Lower Dk Beams	20	7	15	7		
Ditto Bilge (No. 2) size above & below, double	4	3	6	4	3	6	Ceiling between Decks	2					
Transoms, material <u>Iron</u> or, if none, in what manner compensated for.							Stringer or Tie Plates outside Hatchways	10	7	9 3/4	7		
Knight-heads, and Hawse Timbers <u>Leak Chocks</u>							Deck Beam Clamps or Spirketting „ Shelf						
The Frames or Ribs extend in one length from <u>Keel</u> to <u>Gunwale</u> rivetted through plates with (3/4 in.) rivets, about (5) apart.							„ „ „						
The reverse angle irons on the floors extend in one length across the middle line from <u>flat</u> to <u>Hold Beams</u>							Stringers in Hold	double angle iron	4x3	6			
„ „ „ on the frames „ „ „ from <u>flat</u> to <u>Deck & Hold Beams alternately</u>							Deck, Lower Parting and 8 ft. off P.	2 1/2					
Keelson, how are the various lengths of plates or angle irons connected? <u>Butt Straps</u>							Deck, Upper, how fastened to Beams	with out & inner Bolts					
Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets (3/4 in.) diameter averaging (5 1/2 in.) from centre to centre of rivet.							Bulkheads, No. 1 Collision Thickness of	6 1/16					
„ Edges from Garboards to upper part of bilge, worked carvel with a lining piece (in.) thick, or clencher, double or single rivetted; rivets (3/4 in.) diameter, averaging (3 in.) from centre to centre of rivets.							„ how secured to the sides of the ship	Double Frames					
„ Butts from Keel to turn of bilge, worked carvel with a lining piece (10/16) thick, double or single rivetted; rivets (3/4 in.) diameter, averaging (3 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? <u>at alternate strakes</u>							„ size of vertical angle iron and their distance apart	2 1/2 x 2 1/2 x 2 1/2 7/8 apart					
„ Edges from bilge to sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single rivetted; rivets (3/4 in.) diameter, averaging (3 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? <u>at alternate strakes</u>													
„ Edge of Sheerstrake, double or single rivetted? <u>double at the lower edge & single at the top</u>													
„ Butts from bilge to planksheers, worked carvel with a lining piece (5/16) thick, double or single rivetted; rivets (3/4 in.) diameter averaging (3 in.) from centre to centre of rivets. Breadth of laps in double rivetting (4 1/2) Breadth of laps in single rivetting (2 1/2)													
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?													
Planksheer, how secured to the plating of the sides													
Waterway „ „ planksheer and to the Beams													
Deck Beams, how secured to the side? <u>Keel plates 5/16 thick</u>													
Hold or Lower Deck „													
Paddle „													
No. of breasthooks <u>four</u> crutches <u>three</u> how are pointers compensated? <u>Plate Iron</u>													
What description of iron is used for the angle iron and plate iron in the vessel? <u>Plate from the Stockton</u> Builder's Signature													
<u>Iron & angle iron from Lott & Wilson & Bell & Hopkins & Co.</u>													

3639 Iron

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? they are

Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? they do

Do the fillings between the ribs and plates fill in solid with single pieces, or are they in short lengths of various thicknesses? solid pieces

Do the holes for rivetting plate to frames, lining pieces, or plate to plate, &c., conform well to each other? they do and are the rivet holes well and sufficiently countersunk in the outer plate? they are

Are there any rivets which either break into or have been put through the seams or butts of the plating? a few in the butts.

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

She has SAILS.		CABLES, &c.		ANCHORS, and their weights.	
N ^o .		Certificates produced <i>proof strain test</i>	Fathoms.	Inches.	Certificate of test produced <i>proof strain test</i>
2	Fore Sails,	Chain	270	1 3/8	Bower,
2	Fore Top Sails,	Hempen-Stream Cable	60	1 5/16	2 1/2
2	Fore Topmast Stay Sails,	Hawser	80	6	2 1/4
1	Main Sails,	Towlines	80	8 1/2	Stream,
2	Main Top Sails,	Warp	80	5	Kedge,
and others as usual		All of <u>Good</u> quality.	80	4	
					N ^o . Weight.
					3 23.3.10
					23.0.4
					23.1.12
					1 7.1.21
					2 3.1.10
					2.1.22

Her Standing and Running Rigging Wire Hemp sufficient in size and Good in quality.

She has one Long Boat and two others

The present state of the Windlass is Good Capstan Good and Rudder Good Pumps two Metal Good

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

2nd. On the plating during the progress of rivetting Special Survey between

3rd. When the beams were in and fastened, and before the decks were laid the 9th of January 1864

4th. When the ship was complete, and before the plating was finally coated and the present date

5th. After the ship was launched

This vessel has double angle-iron stringers in the Hold between the Bilge & Hold Beams not required by the Rules, the longitudinal tie plates outside Hatchways & the stringer plates on the Hold Beams ends are in excess but it will be seen that the Deck is 1/8 of an inch thinner than required by the Rules in some places, which the Builder accounts for by the irregularity at the planing Machine where the plank was prepared, in other respects the vessel is eligible to the class recommended below.

In what manner are the surfaces preserved from oxidation? Portland Cement on upper part of Bilges & oxide of Iron internally, McSams paint & Oxide of Iron externally.

I am of opinion this Vessel should be classed A 1

The amount of the Fee£ 5 : " : " is received by me,

Order No. 1499 Special£ 24 : 10 : "

Certificate (if required)£ " : " : "

Committee's Minute 21 June 1864

Character assigned A 1

Wm Miles

We have examined this Report and find it correct for the class recommended excepting the slight deviation in the thickness of the upper deck, which in our opinion should not affect his class.

Some 21/6