

3923 IRON SHIPS.

No. 2281 Survey held at Glasgow Date 23rd December 1864

on the "S.S. Phosphorus" Master Chambers

Tonnage Gross 304 1/4 Engine Room 45 1/4 Register 1592 7/8 Built at Glasgow

When Built 1864 Launched 30th November By whom built London & Glasgow Engineering & Ship Bldg Co. (Limited)

Owners Wm Dixon Port belonging to Liverpool Destined Voyage Mediterranean

If Surveyed Afloat or in Dry Dock Whilst Building

Length aloft		Extreme Breadth		Depth from top of Upper Deck		Beam to top of Floor		Power of Engines		Horse	
Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches	Horse			
31	8 1/2	36	3 1/2	25	9 1/2	25	9 1/2	12		300	
<p>Distance of Frames or Ribs from moulding } edge to moulding edge, all fore and aft } <u>18 1/2</u></p> <p>Floors, Size of Angle Iron, and No. <u>1</u> at bottom of Floor Plate..... <u>5 1/2</u> <u>3 1/2</u> <u>1 1/2</u> <u>5 1/2</u> <u>3 1/2</u> <u>1 1/2</u></p> <p>„ depth and thickness of Floor Plate at mid line <u>29</u> <u>1 1/2</u> <u>25</u> <u>1 1/2</u></p> <p>„ depth and thickness of Floor Plate at Bilge Keelson <u>10</u> <u>1 1/2</u> <u>1 1/2</u></p> <p>„ Size of Reversed Angle Iron, and No. <u>1</u> at top of Floor Plate.. <u>4</u> <u>3 1/2</u> <u>9 1/2</u> <u>4</u> <u>3 1/2</u> <u>9 1/2</u></p> <p>Frames, Size of Angle Iron, single or double.. <u>5 1/2</u> <u>3 1/2</u> <u>1 1/2</u> <u>5 1/2</u> <u>3 1/2</u> <u>1 1/2</u></p> <p>„ Reversed Iron, if to every frame } <u>to the height of frame</u></p> <p>„ „ every other frame. <u>to the height of frame</u></p> <p>Beams, Deck (No. <u>16</u>) double Angle Iron, Plate, or Bulb Iron..... <u>9</u> <u>1 1/2</u> <u>9</u> <u>1 1/2</u></p> <p>„ „ double or single Angle Iron, on upper edge..... <u>3 1/2</u> <u>3 1/2</u> <u>7 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>7 1/2</u></p> <p>„ „ average space between <u>3 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>3 1/2</u></p> <p>„ „ if wood (No.) sided & moulded</p> <p>„ Hold, or Lower Deck (No. <u>62</u>) double Angle Iron, Plate, or Bulb Iron <u>9</u> <u>1 1/2</u> <u>9</u> <u>1 1/2</u></p> <p>„ „ double or single Angle Iron on upper edge..... <u>3 1/2</u> <u>3 1/2</u> <u>7 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>7 1/2</u></p> <p>„ average space between <u>3 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>3 1/2</u></p> <p>„ „ if wood (No. <u>23</u>) sided & moulded <u>9</u> <u>1 1/2</u> <u>9</u> <u>1 1/2</u></p> <p>„ Paddle, wood, sided and moulded, or if Iron, size of Plate <u>3 1/2</u> <u>3 1/2</u> <u>7 1/2</u> <u>3 1/2</u> <u>3 1/2</u> <u>7 1/2</u></p> <p>„ Engine Overings, Space, between <u>7 1/2</u> <u>4 1/2</u></p> <p>Keelson, single plate, box, or intercostal <u>As per Midship</u></p> <p>„ Size of Plates <u>Section</u></p> <p>„ Size of Angle Irons <u>6</u> <u>5 1/2</u> <u>9 1/2</u> <u>6</u> <u>5 1/2</u> <u>9 1/2</u></p> <p>Ditto Bilge (No. <u>3</u>) Bulb Plate <u>9</u> <u>1 1/2</u> <u>9</u> <u>1 1/2</u></p> <p>Transoms, material <u>Iron plate</u>, if none, in what manner compensated for.</p> <p>Knight-heads, and Hawse Timbers <u>Iron Frames</u></p> <p>The Frames or Ribs extend in one length from <u>Middle Line</u> to <u>Gunwale</u> rivetted through plates with (<u>1</u> in.) rivets, about (<u>4</u> in.) apart.</p> <p>The reverse angle irons on the floors extend in one length across the middle line from <u>Lower Deck Beam</u> to <u>Lower Deck Beam</u></p> <p>„ „ „ on the frames „ „ „ from <u>Middle Line</u> to <u>Gunwale</u> Alternately</p> <p>Keelson, how are the various lengths of plates or angle irons connected? <u>By Butts & Coveys</u></p> <p>Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets (<u>1 1/2</u> in.) diameter averaging (<u>5 1/4</u> in.) from centre to centre of rivet.</p> <p>„ Edges from Garboards to upper part of bilge, worked carvel with a lining piece (<u>1</u> in.) thick, or clencher, double or single rivetted; rivets (<u>1</u> in.) diameter, averaging (<u>4</u> in.) from centre to centre of rivets.</p> <p>„ Butts from Keel to turn of bilge, worked carvel with a lining piece (<u>1 1/2</u> in.) thick, double or single rivetted; rivets (<u>1</u> in.) diameter, averaging (<u>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>Yes</u></p> <p>„ Edges from bilge to sheerstrake, worked carvel with a lining piece (<u>1</u> in.) thick, or clencher, double or single rivetted; rivets (<u>1 1/2</u> in.) diameter, averaging (<u>3 1/2</u> in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? <u>Yes</u></p> <p>„ Edge of Sheerstrake, double or single rivetted? <u>Double</u></p> <p>„ Butts from bilge to planksheers, worked carvel with a lining piece (<u>1 1/2</u> in.) thick, double or single rivetted; rivets (<u>1 1/2</u> in.) diameter averaging (<u>3 1/2</u> in.) from centre to centre of rivets. Breadth of laps in double rivetting (<u>5 1/2</u> in.) Breadth of laps in single rivetting (<u>5 1/2</u> in.)</p> <p>Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? <u>Double</u></p> <p>Planksheer, how secured to the plating of the sides { Explain by sketch } <u>As per Section</u></p> <p>Waterway „ „ planksheer and to the Beams { if necessary. }</p> <p>Deck Beams, how secured to the side? <u>Welded & Rivetted to Framing</u></p> <p>Hold or Lower Deck „ <u>do</u></p> <p>Paddle „ <u>do</u></p> <p>No. of breasthooks <u>Five</u> crutches <u>Five</u> how are pointers compensated? <u>All Stringers run through</u></p> <p>What description of iron is used for the angle iron and plate iron in the vessel? <u>Connell's Patent</u> Builder's Signature <u>London & Glasgow Engineering & Ship Bldg Co. (Limited)</u></p>											

3923 Jan

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? Yes
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? Yes
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 few in corners of Butts

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

She has SAILS.

N^o.
One Fore Sails,
Complete Fore Top Sails,
Suit Fore Topmast Stay Sails,
Main Sails,
Main Top Sails,
and

CABLES, &c.		
Detected by <u>Robt. Russell</u>	Fathoms.	Inches.
Chain	300	1 1/2
Hempen Stream Cable	90	11
Hawser <u>Chain</u>	60	1 1/8
Towlines <u>Hemp</u>	90	6
Warp	90	1 1/2
All of <u>Good</u> quality.	90	3 1/2

ANCHORS, and their weights.		
Detected by <u>Robt. Russell</u>	N ^o .	Weight.
Bower,	3	31.1.14
Stream,	1	12.0.1
Kedge,	3	6.3.8

Her Standing and Running Rigging Calculated sufficient in size and Good in quality.

She has One Long Boat and One Life Boat and One Cutter
The present state of the Windlass is New Capstan New and Rudder New Pumps New & Efficient

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 ordinary
 - 2nd. On the plating during the progress of rivetting Survey from 6th July till 23rd Dec 1864
 - 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
 - 5th. After the ship was launched

The Frames are 21 in Apart except in Engine Room for a Space of 4.6 feet where they are 18 in. An Intercostal Nelson is fitted between Middle and Ridge Keelson extending from 65 ft before Boiler Room Bulkhead to 49 ft abaft Engine Room Bulkhead and stands 13 in above the Floor with Four Angle Irons 6 x 4 x 1/16 except in Engine & Boiler Space where the Intercoastal Nelson is the Depth of Floor Plate and Flat Plates one on each side and one in the Centre are Rivetted to the Double Reverse Bars of the Floor, the Floors in this Space are 3 in Deeper than in the other part of the keel and the Double Reverse Bars are extended to the upper part of Ridge. The Ridge Keelsons are formed by Two Angle Irons 6 x 4 x 1/16 with a Built Plate 9 x 1/2 for half the Length Amidships. Orlop Beams 23 in Abt are 7 x 1 1/2 in apart alternately. The Stringer on Upper Deck Beams is 84 in wide and connected to the Sheerstrake with Angle Irons 5 x 5 x 1/16, there is also a Stringer of Angle Iron running fore & aft within the Frames 6 x 4 x 1/16 forming a gutter between. Pairs of Diagonal Rib Plates are fitted on Upper Deck Beams and eight Pairs on Lower Deck Beams. The Sheerstrake is Doubled for 3/4 the length of the Ship.

In what manner are the surfaces preserved from oxidation? Red Lead and Patent Paint

I am of opinion this Vessel should be classed A 1

The amount of the Fee £ 5 : - : is received by me,
Special £ 13 : 13 : Accounted for in
Certificate (if required) £ - : 5 : Det. Sec. List

Committee's Minute 6th January 1865

Character assigned A 1

* M. W. Dixon Esq.
14 1/2 The Albany
Liverpool

Release
The Strake plates on Middle is 4" to 7" and do not to be rivetted the outside. But the upper deck stringers are marked according to the plan.