

IRON SHIPS

Survey held at London Date, First Survey 25th Nov 1871

Last Survey 25th Nov 1871

Steamer Heptarchy

Master Chas. E. Frost

under age Deck	703.31	ONE, OR TWO DECKED, SPAR, OR AWNING- DECKED VESSELS.	Half Moulded Breadth....	Built at <u>London</u>
of Spar Deck, or Awning Deck.	07.57	Half moulded breadth ... 13.200	Total Depth if three or more Decks ...	When built <u>1870/71</u> Launched <u>15th Aug 71</u>
of Deck, or Qr. Dk.	7.27	Depth from upper part of Keel to top of Upper Deck Beams ... 18.875	Depth of Half Mid- ship Frame ...	By whom built <u>Mrs Samuda Bros</u>
Houses	17.65	Girth of Half Midship Frame (as per Rule) ...	3rd Number ...	Owners <u>L. Bacon, J. S. A. Samuda</u>
Forecastle	779.74	1st Number ...	Length ...	Port belonging to <u>London</u>
Tonnage	28.48	2nd Number ...	4th Number ...	Destined Voyage
Space, or Rule	249.52	Depths to Length ...	Breadths to Length ... 7.5	If Surveyed while Building, Afloat, or in Dry Dock.
Register Tonnage, on Beam ...	501.74			<u>on the Railways Ship Afloat</u>

Length on deck as per Rule	200 -	Moulded Breadth	26 5	Depths from top of Floors to Upper and Main Deck Beams, as per Rule	17 5	Power of Engines	90	No. of Decks	One	No. of Tiers of Beams	Two
<p>Dimensions of Ship per Register, length <u>201.2</u> breadth <u>26.5</u> depth <u>17.4</u></p>											
<p><u>Flat plates.</u></p> <p>Keel, of bar iron, depth and thickness ... <u>30 x 9/16</u></p> <p>Do. if centre through plate, depth and thickness ... <u>7 x 1/2</u></p> <p>tern-post for Rudder do. do. ... <u>7 x 1/2</u></p> <p>tern-post for Propeller ... <u>7 x 1/2</u></p> <p>Distance of Frames from moulding edge to moulding edge, all fore and aft ... <u>21</u></p> <p>Frames, size of Angle Iron, for 1/2 length amidships ... <u>4 x 3 7/16</u></p> <p>Do. for 1/2 at each end ... <u>4 x 3 7/16</u></p> <p>Reversed Frames, size of Angle Iron ... <u>3 x 3 7/16</u></p> <p>Floors, depth and thickness of Floor Plate at mid line for half the length amidships ... <u>17 1/2 x 9/16 x 7/16</u></p> <p>Do. at the ends ... <u>9/16</u></p> <p>Do. do. at Bilge Keelson ... <u>2 1/2 x 11/16</u></p> <p>Do. height extended at the Bilges ... <u>6 x 4 x 9/16</u></p> <p>Beams, Upper, Spar, or Awning Deck (No. <u>53</u>) ... <u>6 1/2 x 9/16</u></p> <p>Angle or double Angle Iron, Plate or Tee Bulb Iron at upper edge ... <u>2 1/2 x 5/16</u></p> <p>Angle or double Angle Iron on Upper edge ... <u>2 1/2 x 5/16</u></p> <p>Average space ... <u>42</u></p> <p>Beams, Main or Middle Deck (No.) single, } or double Angle Iron, Plate or Tee Bulb Iron } Angle, or double Angle Iron, on Upper Edge ... <u>26 x 9/16</u></p> <p>Average space ... <u>42</u></p> <p>Beams, Lower Deck, Hold or Orlop (No. <u>26</u>) ... <u>6 x 4 x 9/16</u></p> <p>Angle or double Angle Iron, Plate or Tee Bulb Iron } Angle or double Angle Iron on Upper Edge ... <u>3 x 3 x 5/16</u></p> <p>Average space ... <u>42</u></p> <p>Keelson Centre line, single or double plate, } Box, or Intercoastal, size of Plates ... <u>27 x 9/16</u></p> <p>Bulb Plate to Intercoastal Keelson ... <u>6 x 4 x 9/16</u></p> <p>Size of Angle Irons on lower edge ... <u>3 1/2 x 3 1/2 x 7/16</u></p> <p>Side Intercoastal Keelson, size of Plates ... <u>6 x 4 x 9/16</u></p> <p>Angle Irons on tops of Floors ... <u>3 x 3 x 5/16</u></p> <p>Bilge Keelson, Bulb Iron ... <u>6 x 4 x 9/16</u></p> <p>Intercoastal plates riveted to plating for <u>22</u> length do. Angle Irons ... <u>3 1/2 x 3 1/2 x 7/16</u></p> <p>Stringers (No. <u>26</u>) size of Angle Irons ... <u>6 x 4 x 9/16</u></p> <p>Intercoastal plates riveted to plating for length.</p> <p>Planks, material or, if none, in what manner compensated for.</p> <p>Stanchions</p> <p>Hawse Timbers</p> <p>Harfield's Patent Pall Bitt</p> <p>Frames extend in one length from <u>Keel</u> to <u>Gunnels</u></p> <p>Reverse Angle Irons on the floors and frames extend <u>from the middle line from Bilge to Bilge</u> and to <u>Gunnels</u> alternately</p> <p>Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u></p> <p>Garboard, double or Riveted to Keel, double or at upper edge, with Rivets (<u>7/8</u> in.) diameter, averaging (<u>3 1/2</u> ins.) from centre to centre.</p> <p>Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (<u>3/4</u> in.) diameter, averaging (<u>3 1/2</u> ins.) from centre to centre.</p> <p>Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (<u>3/8</u>) thick, double or single Riveted; with Rivets (<u>7/8</u> in.) diameter averaging (<u>3 1/2</u> ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>No</u></p> <p>Strakes at Bilge for <u>half</u> length, treble riveted with Butt Straps <u>4/16</u> thicker than their plates. <u>See Remarks on other side</u></p> <p>Edges from bilge to Main Sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets (<u>3/4</u> in.) diameter, averaging (<u>3 1/2</u> ins.) from centre to centre.</p> <p>Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge <u>Single</u> At lower edge <u>Double</u></p> <p>Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (<u>7/16</u>) thick, double or single Riveted; with Rivets (<u>3/4</u> in.) diameter, averaging (<u>3 1/2</u> ins.) from centre to centre.</p> <p>Butts of Main Sheerstrake, double or treble Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for <u>half</u> length amidships. Breadth of laps of plating in double Riveting (<u>5 1/2</u>) Breadth of laps of plating in single Riveting (<u>2 1/2</u>)</p> <p>Planks of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? <u>treble and double</u></p> <p>Planks, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)</p> <p>Planks of the various Decks, how secured to the sides? <u>See Remarks on other side</u></p> <p>Description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.?</p> <p>Manufacturer's name or trade mark, <u>A. C. Daines, Lock, Wilson and Bell and J. Brown, Sheffield</u></p> <p>I certify that the above is a correct description of the several particulars therein given.</p> <p>Builder's Signature, <u>Joseph S. A. Samuda</u> Surveyor's Signature, <u>W. J. Turner</u></p>											

1000-0510021

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed*
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*
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *Yes* and are the rivets well and sufficiently countersunk in the plate and punched from the faying surfaces? *Yes*
Are there any rivets which either break into or have been put through the seams or butts of the plating? *Very few and in Butts*

Her Masts, Bowsprit, Yards, &c., are in *Good* condition, and sufficient in size and length. If they are of Iron or Steel give the 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 *Rigged as a Three Masted Schooner*

* *Lepton West* *9554 Ton*
Refined as a Three Masted Schooner
11 "Cambrion West"
Lepton West *27th and 31st July 1871*
Lepton West *22nd June 1871*

Number for equipment		Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test as per Certificate.	In. req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test as per Certificate.	W't req'd per Rule.	Test req'd per Rule.
N ^o .	SAILS.	CABLES, &c.											
	Fore Sails,	Chain						Bowers					
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).						(State Machine where Tested, and name of Superintendent).					
	Fore Topmast Stay Sails	Hempen Stream	90	10	10								
	Main Sails,	Cable		8	8			Stream including stock					
	Main Top Sails,	Hawser		8	8								
		Towlines		5	5								
		Warp		4				Kedges					
		All of <i>good</i> quality.											

Her Standing and Running Rigging *pine and hemp* sufficient in size and *good* in quality. She has *one* Long Boat and *three* other boats. The present state of the Windlass is *good* Capstan *good* and Rudder *good* Pumps *one pump in each compartment*
Engine Room Skylights.—How constructed? *iron frame and plate* How secured in ordinary weather? *Leak frames glazed*
What arrangements are there for deadlights in such for bad weather? *Solid dead lights of pine fitted into the Bulkheads*
Coal Bunker Openings.—How constructed? *of plate iron* How are lids secured? *Solid lids* How high above deck? *flush*
Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board? *Tons cut through iron bulkheads twice on each side*

Cargo Hatchways.—How formed? *of iron frame and Bulk plate* State size *6ft 5 in x 5ft 6 in, 10ft 5 in x 7ft 6 in*
If of extraordinary size, state how framed and secured? *framing 2x 9/16 inches by angle iron having a cross beam 13 1/2 x 9/16 and strong post and*
What arrangement for shifting beams? *of iron 5x4 1/2 inches with plate iron beam 13 1/2 x 9/16 and strong post and*
Hatches, themselves, whether strong and efficient? *Strong and efficient* Main Hatchways.—State size *10ft 8 in x 7ft 6 in, 13ft 5 in x 7ft 6 in*

Order for Special Survey No. _____ DATES of _____
Date _____ Surveys held _____
Order for Ordinary Survey No. _____ while building _____
Date _____ as per _____
Section 18. 1st. On the several parts of the frame, when in place, and before the plating was wrought
2nd. On the plating during the progress of riveting
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 or cemented
5th. After the ship was launched and equipped

General Remarks, *This vessel is well built and is fitted with three water tight compartments or water Ballast Tanks; viz one in the fore compartment from keel to Hold Beams, a second agreeably to the accompanying "Midship Section" and extending for 120 feet abaft fore bulkhead and the remaining one from the after bulkhead to engine Room aft to Post and in height from the keel to about 24 ins above the load line. The Plating of the Strake coming in way of the "Midship Water Ballast Tank" are of the same thickness as the outside plating and they are double riveted. She has been compared with the Rules for the "100 T Classification" and it will be seen that the outside plating excepting the Carboard Strake and Sheer Strake is 7/16" thick as part compensation for which I beg to draw the Committee's attention to the accompanying details of the peculiar mode of her construction and respectfully to recommend that she be Classed *95A1**

In what manner are the surfaces preserved from oxidation? Inside *Enamelled Cement* Outside *Red Lead*
I am of opinion this Vessel should be Classed *95A1* *Portland Cement and Paint and Black Varnish*
The amount of the Entry Fee£ 5 : - : is received by me,
Special£ 39 : - :
Certificate : - :
(Travelling Expenses)
(if any) £ *4*

Committee's Minute *30 November 1871*
Character assigned *95A1*
MR