

# IRON SHIPS.

No. 16600 Survey held at Liverpool Date Jan 18<sup>th</sup> to 29<sup>th</sup> Sept 1860  
 on the Iron Ship "Sarah & Emma" Master B Wingate  
 Tonnage Gross 1097<sup>02</sup> Engine Room Register Built at Liverpool launched 1 Sept 60  
 When Built 1860 By whom built Thos Vernon & Son Owners Farnworth & Jardine  
 Port belonging to Liverpool Destined Voyage Calcutta  
 Surveyed Afloat or in Dry Dock While Building under Special Survey Afloat

Length aloft	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from top of Upper Deck	Feet.	Inches.	Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse No.
199	6	10	33	8	10	22	9	10	22	9	10	none	
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	18		Inches in Ship	18		Inches required per Rule							
Floors, Size of Angle Iron, and No. <u>one</u> at bottom of Floor Plate	5	3	9	5	3	9							
depth and thickness of Floor Plate at mid line	26		11	23		11							
depth and thickness of Floor Plate at Bilge Keelson	6		11	5		11							
Size of Reversed Angle Iron, and No. <u>one</u> at top of Floor Plate	3 1/2	3	8	3 1/2	3	8							
Frames, Size of Angle Iron, single <u>double</u>	5	3	9	5	3	9							
Reversed Iron, <u>3</u> to every frame	3 1/2	3	8	3 1/2	3	8							
Beams, Deck (N <sup>o</sup> . <u>62</u> ) <u>double Angle Iron</u>	8 1/2	3	9	8 1/4	3	9							
Bulb Iron with double Angle Iron on top	3 1/2	3	8	3	3	7							
depth & thickness of plate amidships													
double or single Angle Iron, on lower edge	3 ft		3 ft										
average space between													
if wood (N <sup>o</sup> . <u>59</u> ) sided & moulded	3 1/2	3	8	3	3	7							
Hold, or Lower Deck (N <sup>o</sup> . <u>59</u> ) <u>double Angle Iron or Bulb Iron</u> with double Angle Iron on top	8 1/2	3	9	8 1/4	3	9							
depth & thickness of plate amidships													
double or single Angle Iron, on lower edge	3 ft		3 ft										
average space between													
if wood (N <sup>o</sup> . <u>59</u> ) sided & moulded													
Paddle, wood, sided and moulded or if Iron, size of Plate													
Engine													
Keelson, wood, sided & moulded, iron, size of plate, N <sup>o</sup> . Box, give sketch & dimensions	12 x 1 1/2		2 Bars 5 x 4 1/2	15 1/2	8 1/2	1 1/2							
Side or Bilge <u>Intercostal</u>	Plate 1 1/2		2 Angle Irons 5 x 4 1/2										
Number <u>Five</u>													

Transoms, material Iron or, if none, in what manner compensated for. frames & stringer plates  
 Knight-heads Iron Bulkheads, N<sup>o</sup>. Two Thickness of 1 1/2  
 Hawse Timbers Iron are they free from defects? yes how secured to the sides of the ship by one frame & Bracket Plates  
 size of vertical angle iron and their distance apart 3 1/2 x 3 x 1/2 - 30 apart  
 The Frames or Ribs extend in one length from Keel to gunwale rivetted through plates with (1/8 in.) rivets, about (1/2 in.) apart.  
 The reverse angle irons on the floors extend in one length across the middle line from Bilge to Bilge & alternately to top of bilge  
 on the frames from Bilge to Lower Deck on every frame and from Bilge to gunwale on alternate frames  
 Keelson, how are the various lengths of plates or angle irons connected? by welts & rivets  
 Plates, Garboard, double single rivetted to keel & at upper edge, with rivets (1 in.) diameter averaging (3 3/4 in.) from centre to centre of rivet.  
 Edges from Garboards to upper part of bilge, worked carvel with a lining piece (1/2 in.) thick, or clench, double or single rivetted; rivets (1/8 in.) diameter, averaging (3 1/4 in.) from centre to centre of rivets.  
 Butts from Keel to turn of bilge, worked carvel with a lining piece (3/4 in.) thick, double or single rivetted; rivets (1/8 in.) diameter, averaging (3 1/4 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? on each alternate tier of plating  
 Edges from bilge to planksheer, worked carvel with a lining piece (1/2 in.) thick, double or single rivetted; rivets (1/8 in.) diameter, averaging (3 1/4 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? on each alternate tier of plating  
 Butts from bilge to planksheers, worked carvel with a lining piece (1/2 in.) thick, or clench, double or single rivetted; rivets (1/8 in.) diameter averaging (3 1/4 in.) from centre to centre of rivets. Breadth of laps in double rivetting (5 in.) Breadth of laps in single rivetting (2 1/2 in.)  
 Planksheer, how secured to the plating of the sides Explain by sketch, By Angle Iron  
 Waterway planksheer and to the Beams if necessary.  
 Side trussing breadth and thickness of plates how secured? See Beam Clamps & Bilge Stringers  
 Deck trussing breadth and thickness of plates how secured? See Tie Plates  
 Deck Beams, how secured to the side? By knees of plate Iron 22 Inches deep & also stringer plates  
 Hold or Lower Deck by ditto  
 Paddle by ditto  
 Number of breasthooks crutches how are pointers compensated? By plates fitted & rivetted between frames  
 What description of iron is used for the angle iron and plate iron in the vessel? Best M<sup>o</sup> & S<sup>o</sup> & S<sup>o</sup> & S<sup>o</sup> Builder's Signature Thomas Vernon & Son



2252 Men

**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? 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? Very few

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

She has **SAILS.**

**CABLES, &c.**

**ANCHORS, and their weights.**

N <sup>o</sup> .			Fathoms.	Inches.		N <sup>o</sup> .	Weight.
2	Fore Sails,	Chain .....	300	1 3/4	Bower, .....	3	33.3.21
2	Fore Top Sails,	Chain .....	80	1			33.3.0
2	Fore Topmast Stay Sails,	Hempen Stream Cable .....	90	8	Stream, .....	1	33.0.0
2	Main Sails,	Hawser .....					9.2.27
2	Main Top Sails,	Towlines .....	90	11	Kedge, .....	2	5.3.10
	and others	Warp .....	90	7			3.1.4
		All of <u>Best</u> quality.					

Rigging is of best Galvanized Wire  
Her Standing and Running Rigging is of Hemp sufficient in size and of the best in quality.

She has one Long Boat and three others

The present state of the Windlass is good Capstan good and Rudder good Pumps 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
	2nd.	On the plating during the progress of rivetting
	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 materials of which this ship is built together with the workmanship are of the best description*

*Sarah Emma*

*16,600.-*

In what manner are the surfaces preserved from oxidation?

*Red Lead and M<sup>e</sup> Jones Patent Composition*

I am of opinion this Vessel should be classed 12 A 1

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

*100* Special .....£ 54 : 17 : - *3/10/60 Wope*

Certificate (if required) .....£ : *Gratis*

Committee's Minute *5<sup>th</sup> October* 18 *60*

Character assigned *A 1 for 12 Years*

*Brilligton*

*Copy of Certificate*

*She appears eligible for the Class recommended*

*Oct 4/60 J. M. M.*



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