

# IRON SHIPS.

No. *7689* Survey held at *Sunderland* Date *4<sup>th</sup> Feb<sup>y</sup>* 18*63*  
on the Ship *"Abel Serman"* Master *John James*  
Tonnage Gross *690* ~~Engine Room~~ Register *690* Built at *Sunderland*  
When built *1863* By whom built *Mr Oswald* Owners *Templey & Co*  
*Leamth Jan<sup>y</sup> 22<sup>d</sup>* Port belonging to *London* Destined Voyage *Montreal*  
~~\* Surveyed Afloat or in Dry Dock~~ *and throughout the Building*

Feet. Inches. Length aloft 170 9 Extreme Breadth 30 6 Depth from top of Upper Deck Beam to top of Floor 19 4 Horse No. Power of Engines...

Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	Inches in Ship 101	Inches required per Rule 101	Stem, if bar iron, moulding and thickness	7 2 1/2	16ths required per Rule 7 2 1/2
Floors, Size of Angle Iron, and No. 1 at bottom of Floor Plate	4 3 7	4 3 7	if plate iron, breadth and thickness	"	"
depth and thickness of Floor Plate at mid line	24 9	19 1/2 9	Stern-post, if bar iron, moulding and thickness	7 2 1/2	7 2 1/2
depth and thickness of Floor Plate at Bilge Keelson	10 9	4 9	if plate iron, breadth and thickness	"	"
Size of Reversed Angle Iron, and No. 1 at top of Floor Plate	3 2 1/2 6	3 2 1/2 6	Keel, if bar iron, depth and thickness	7 2 1/2	7 2 1/2
Frames, Size of Angle Iron, single or double	2 3 7	4 3 7	if plate iron, breadth and thickness	"	"
Reversed Iron, 1/2 to every frame	3 2 1/2 6	3 2 1/2 6	Garboard Plates, thickness	Description of Iron	"
Beams, Deck (No. 1) double Angle Iron	3 3 5	2 1/2 2 1/2 5	From Garboard to upper part of Bilge	"	10
Bulb Iron with double Angle Iron on top	3 3 5	2 1/2 2 1/2 5	From upper part of Bilge to Sheerstrakes	"	9
depth & thickness of plate amidships	7 1/2 7	7 1/2 7	Sheerstrakes	"	10
double or single Angle Iron	"	"	Breadth & thickness of Butt Straps to outside plating	9 x 11 1/2	11 x 10 1/2
Bulb on lower edge	3 feet	3 feet	Planksheers	Material	"
average space between	"	"	Gunwale Plate or Stringer on ends of Up. Dk Beams	"	2 1/2 9 22 1/2 9
if wood (No. 1) sided & moulded	"	"	Angle Iron on ditto	"	5 x 3 1/2 11 13 x 3 1/2 7
Hold, or Lower Deck (No. 1) double Angle Iron or Bulb Iron with double Angle Iron on top	3 3 5	2 1/2 2 1/2 5	Waterway	Cutler	"
depth & thickness of plate amidships	7 1/2 7	7 1/2 7	Deck	Yellow Pine	3 1/2 " 3 1/2 "
double or single Angle Iron	"	"	Ceiling in Hold	Red Pine	3 x 2 1/2
Bulb on lower edge	3 feet	3 feet	Ceiling betwixt Decks	Batten	"
average space between	"	"	Beam Clamps	"	15 0 " "
if wood (No. 1) sided & moulded	"	"	Stringer Plates on ends of Hold or Lower Dk Beams	"	23 9 22 1/2 9
Paddle, wood, sided and moulded or if Iron, size of Plate	"	"	Ceiling between Decks	Battens	"
Engine	"	"	Stringer or Tie Plates outside Hatchways	"	11 1/4 9 11 1/4 9
Keelson, wood, sided & moulded, iron, size of plate, if Box, give sketch & dimensions	10 15 0	15 9	Deck Beam Clamps	"	"
Side or Bilge	5 3 1/2 9	4 3 1/2 7	Stringers in Hold	"	5 x 3 1/2 9 10 x 2 1/2 7
Number	See sketch sent herewith		Deck, Lower	"	"
Transoms, material	Iron		Deck, Upper, how fastened to Beams	Screw bolts put through from the upper side and nuts at the under side of the cross iron of the beams - The Quarter Deck with screw bolts from the under side	
Knight-heads	Iron Bulkhead		Stringers in Hold	"	
Hawse	Teak		Deck, Lower	"	
The Frames or Ribs extend in one length from	Keel		Deck, Upper, how fastened to Beams	Screw bolts put through from the upper side and nuts at the under side of the cross iron of the beams - The Quarter Deck with screw bolts from the under side	
The reverse angle irons on the floors extend in one length across the middle line	from		Stringers in Hold	"	
Keelson, how are the various lengths of plates or angle irons connected?	With Butt straps & angle irons at top & bottom, well shifed, see sketch		Deck, Lower	"	
Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets	1/2 in. diameter averaging 1/2 in. from centre to centre of rivet.		Deck, Upper, how fastened to Beams	Screw bolts put through from the upper side and nuts at the under side of the cross iron of the beams - The Quarter Deck with screw bolts from the under side	
Edges from Garboards to upper part of bilge, worked	carvel with a lining piece (1/2 in.) thick, or clencher, double or single rivetted; rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre of rivets.		Stringers in Hold	"	
Butts from Keel to turn of bilge, worked	carvel with a lining piece (1/2 in.) thick, double or single rivetted; rivets (3/4 in.) diameter, averaging (3 1/2 ins.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?	No	Deck, Lower	"	
Edges from bilge to planksheer, worked	carvel with a lining piece (1/2 in.) 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?	No	Deck, Upper, how fastened to Beams	Screw bolts put through from the upper side and nuts at the under side of the cross iron of the beams - The Quarter Deck with screw bolts from the under side	
Butts from bilge to planksheers, worked	carvel with a lining piece (1/2 in.) thick, or clencher, double or single rivetted; rivets (3/4 in.) diameter averaging (3 ins.) from centre to centre of rivets. Breadth of laps in double rivetting (1/2 in.) Breadth of laps in single rivetting (2 1/2 in.)		Stringers in Hold	"	
Planksheer, how secured to the plating of the sides	Explain by sketch, See sketch sent herewith		Deck, Lower	"	
Waterway	planksheer and to the Beams		Deck, Upper, how fastened to Beams	Screw bolts put through from the upper side and nuts at the under side of the cross iron of the beams - The Quarter Deck with screw bolts from the under side	
Side trussing	breadth and thickness of plates how secured?		Stringers in Hold	"	
Deck trussing	Diagonal 1/2 in. 7 pairs Rivetted to beam again iron. See plates & stringers		Deck, Lower	"	
Deck Beams, how secured to the side?	With bracket ends, rivetted to the frames,		Deck, Upper, how fastened to Beams	Screw bolts put through from the upper side and nuts at the under side of the cross iron of the beams - The Quarter Deck with screw bolts from the under side	
Hold or Lower Deck	the same as Deck Beams		Stringers in Hold	"	
Paddle	"		Deck, Lower	"	
No. of breasthooks	Four crutches Four how are pointers compensated?	One iron Transom, and orange plates connected	Deck, Upper, how fastened to Beams	Screw bolts put through from the upper side and nuts at the under side of the cross iron of the beams - The Quarter Deck with screw bolts from the under side	
What description of iron is used for the angle iron and plate iron in the vessel?	All the iron was manufactured by Bolckow & Paulsen Manchester		Stringers in Hold	"	



**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? Yes

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

Bowprit, Fore and Main Masts of iron  
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 <u>best of</u> attached	270 19/16	3	32.0.12
2	Fore Top Sails,	Hempen Stream Cable	90 10 1/2		31.2.12
2	Fore Topmast Stay Sails,	Hawser		1	25.1.26
2	Main Sails,	Towlines	90 9 1/2		10.0.4
2	Main Top Sails,	Warp	90 6 1/2	1	4.3.14
	and others as used	All of <u>Good</u> quality.	90 1 1/2		

Her Standing and Running Rigging is of fine & hemp sufficient in size and Good in quality.

She has a Long Boat and Two Life Boats

The present state of the Windlass is secure Capstan Two Rudder, and 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 Inspected under Special Survey from Sep. 12. 1862 to the present date -

This ship has a Quarter Deck 123 feet in length, and 3<sup>11</sup>/<sub>9</sub> in height. The Register Tonnage under the Main Deck is 664, 36 and Quarter Deck 34.60, making 690, 96. in the whole -

The sheer stroke extends 12<sup>in</sup> above the stringer plate, and for 3/4 of the ship's length the Butt straps are 13<sup>in</sup> wide and treble rivetted. The floor of the bottom inside, is protected by Portland Cement -

The Testing certificates of Chain Cables & Anchors are sent with this Report -

In what manner are the surfaces preserved from oxidation?

By iron Oxide Paint.

I am of opinion this Vessel should be classed

12 A.1

Thomas Lawrence

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

Order No. 1260 Special .....£ 34 : 18 : "

Certificate (if required) .....£ " : " : "

Committee's Minute 6 February 1863.

Character assigned A 1 for 12 Years

Feb 5/63  
The appears to be eligible for Classification as herein recommended. I am of opinion in this and in all cases where the Masts of Iron are used, the thickness of the plates should be stated & the dimensions and number of bolts and mode of attachment.