

IRON SHIPS.

No. 8073 Survey held at Sunderland Date April 4th 1864
 on the Ship "Sophia Joakim" Master Ransom
 Tonnage Gross 1018 Net 999 Register 1018 Built at Sunderland
 When Built 1863-4 Launched 10th March 1864 By whom built N. Pile, Hay & Co
 Port belonging to London Destined Voyage Calcutta
 Laid Afloat or in Dry Dock Whilst building

Length aloft	Feet.	Inches	Extreme Breadth	Feet.	Inches	Depth from top of Upper Deck	Feet.	Inches	Power of Engines	Horse.
204	8		32	8		21				
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft	24		23							
Floors, Size of Angle Iron, and No. at bottom of Floor Plate	4 1/2	3 1/2	9	4 1/4	3	8				
depth and thickness of Floor Plate at mid line	22		10	2 1/2		10				
depth and thickness of Floor Plate at Bilge Keelson	10		10			10				
Size of Reversed Angle Iron, and No. at top of Floor Plate	3	3	7	3 1/4	3	7				
Frames, Size of Angle Iron, single or double	4 1/2	3 1/2	9	4 1/4	3	8				
Reversed Iron, to every frame	3	3	7	3 1/4	3	7				
Beams, Deck (No. 48) double Angle Iron	8		8	8		8				
double or single Angle Iron, on upper edge	3	3	6	3	3	6				
average space between	4 feet		3/10							
if wood (No.) sided & moulded										
Hold, or Lower Deck (No. 47) double Angle Iron, Plate, or Bulb Iron	8		8	8		8				
double or single Angle Iron, on upper edge	3	3	6	3	3	6				
average space between	4 feet		3/10							
if wood (No.) sided & moulded										
Paddle, wood, sided and moulded, or if Iron, size of Plate										
Keelson, single plate, box, or intercostal	27		10	26 1/2		10				
Size of Plate, on top edge	8		8	8		8				
Size of Angle Irons	5 1/2	4 1/2	9	5	4 1/2	9				
Ditto Bilge (No. 2) of double angle iron	5 1/2	4 1/2	9	5	4 1/2	9				
Frames, material, plate, or if none, in what manner compensated for										
Knight-heads, and Hawse Timbers	Iron Bulkhead & Deck Chocks									
The Frames or Ribs extend in one length from	Keel to Gunwale									
The reverse angle irons on the floors extend in one length across the middle line from	Keel to Gunwale									
on the frames	from Keel to Gunwale on alternate frames									
Keelson, how are the various lengths of plates or angle irons connected?	with Butts									
Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets (1/4 in.) diameter averaging (5 1/2 in.) from centre to centre of rivet.										
Edges from Garboards to upper part of bilge, worked carvel with a lining piece (in.) thick, or clench, double or single rivetted; rivets (1/2 in.) diameter, averaging (3 1/2 in.) from centre to centre of rivets.										
Butts from Keel to turn of bilge, worked carvel with a lining piece (12/16) thick, double or single rivetted; rivets (1/2 in.) diameter, averaging (3 1/2 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?	at alternate strakes									
Edges from bilge to sheerstrake, worked carvel with a lining piece (in.) thick, or clench, double or single rivetted; rivets (1/2 in.) diameter, averaging (3 1/2 in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below?	at alternate strakes									
Edge of Sheerstrake, double or single rivetted?	at lower edge & single rivetted at upper edge to Bulwark									
Butts from bilge to planksheers, worked carvel with a lining piece (12/16) thick, double or single rivetted; rivets (1/2 in.) diameter averaging (3 1/2 in.) from centre to centre of rivets. Breadth of laps in double rivetting (5) Breadth of laps in single rivetting (3)										
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted										
Planksheer, how secured to the plating of the sides	Explain by sketch									
Waterway	if necessary.									
Deck Beams, how secured to the side?	Bracket pieces lapped on Beams									
Hold or Lower Deck										
Paddle										
No. of breasthooks	five									
how are pointers compensated?	plate transom									
What description of iron is used for the angle iron and plate iron in the vessel?	Plates from Bolckow & Vaughan and the angle iron from Lark Wilson & Bell & Hopkins & Co. of Liddlebrook									

IRON 437-0212

3541 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 .		Certificate produced	Fathoms.	Certificate produced	N ^o .
2	Fore Sails,	Chain 350. tons	300	Bower, 31. tons	3
4	Fore Top Sails,	Hempen Stream Cable 22. tons	60	" " " "	39.2.10
2	Fore Topmast Stay Sails,	Hawser 90	6 1/2	Stream, 1	39.3.0
1	Main Sails,	Towlines 90	8 1/2		11.2.10
4	Main Top Sails,	Warp 90	6	Kedge, 2	5.2.2
and others as usual		All of <u>Good</u> quality.			3.3.7

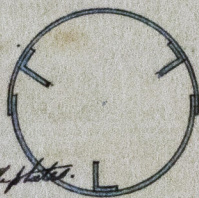
Her Standing and Running Rigging Vine Hemp & Manila sufficient in size and Good in quality.

She has One Long Boat and three others
The present state of the Winches is Good Capstan 2 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 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 1st of October 1863
 - 4th. When the ship was complete, and before the plating was finally coated and the present date
 - 5th. After the ship was launched (See Secretary's Letter, dated 7th Aug^r 1863)

The Foremast Mainmast & Bowspit, are constructed of Iron as per Sketch, with plates 7/16 thick lap seamed & flush butted, the seams single and the butts double rivetted, and stiffened with three angle irons 4 x 3 x 7/16; the butt straps of corresponding thickness with plates.



This Vessel has a topgallant Forecastle & a short raised deck round the quarters, a House for Cabin accommodation immediately before it on the Main Deck, and an elliptic Stern.

It will be seen that the sectional area of the keel is = to 8 x 7/16 small the stem also small, the reverse angle iron on frames & floors 1/4 x 7/16 less and the Collision Bulkhead 1/32 of an inch thin; the frames 1/4 x 7/16 larger the Sternpost 3 x 1/4 &c, Garboard Strakes 3 inches broader, Keelson 1/2 deeper, Sheer Strakes 7/2 broader, Diagonal and longitudinal tie plates on Beams 2 x 2 1/4 broader & 7/16 thicker, Stringer plates on Hold Beams ends 1/4 wider & 7/16 thicker, and the Angle iron stiffening bars on the Collision Bulkhead 3/4 x 7/16 larger than is required by the Rules.

Should the Committee deem the exceptions named, sufficient compensation for the several deficiencies, the vessel is in other respects eligible for the class recommended below.

In what manner are the surfaces preserved from oxidation? Portland Cement to turn of bilge, oxide of Iron & white lead internally, oxide of Iron & M.E. Green's paint externally

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

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

Order No 1437 Special £ 50 : 18 : :

Certificate (if required) £ : : : :

Committee's Minute 8th April 18 64

Character assigned A 1 for 12 Years

The Tonnage of this sailing ship of Iron is 962.25 Gross Tonnage 47.36 Cabin Tonnage 0.55 Deck Tonnage 1010.22 Gross Register Tonnage
The scantlings have been compared with the 900 Ton scale, the deviations from the scantlings are not important, but by her gross Tonnage the vessel is an Intercastle Keelson on each side as will be seen by Sketch. The Steam Chain is shown April 7/64