

IRON SHIPS.

Rec 11/1/69

No. 2642 Survey held at Sunderland Date June 25th 1869
 on the Iron Ship "Tangstone" Master Jumbell
 Tonnage under tonnage deck 698.97 Built at Sunderland When built 1869 Launched June 10th 1869
 Ditto of quarter deck 32.58 By whom built Wm Pile & Co Owners Henry Ellis
 Ditto of ~~poop, forecabin, or~~ 16.70 other erections on upper deck
 Ditto of spar deck
 Ditto of engine room
 Gross tonnage, ~~less~~ 746.25 Port belonging to London Destined Voyage India
 Total Register tonnage, ~~as out on beam~~ 746.25 If Surveyed while Building, Afloat, or in Dry Dock While Building

Length aloft	Feet. Inches.	Extreme Breadth	Feet. Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet. Inches.	Power of Engines	Horse.	N ^o . of Decks
<u>180</u>	<u>-</u>	<u>31</u>	<u>2</u>	<u>19</u>	<u>9</u>			<u>One</u>
<i>(Dimensions of Ship per Register, length 186.4 breadth 31.2 depth 19.65)</i>								
Keel, if bar iron, depth and thickness	Inches in Ship.		Inches required per Rule for 6700 tons Scale.		Plates in Garboard Strakes, breadth and thickness			
„ if plate iron, breadth and thickness	<u>2 1/2 x 8</u>		<u>2 3/4 x 7 1/4</u>		<u>33</u> <u>11</u> <u>30</u> <u>11</u>			
Stem, if bar iron, moulding and thickness	<u>2 1/2 x 8</u>		<u>2 3/4 x 7</u>		Ditto from Garboard to upper part of Bilges			
„ if plate iron, breadth and thickness	<u>2 1/2 x 8</u>		<u>2 3/4 x 7</u>		<u>10</u> <u>10</u>			
Stern-post, if bar iron, moulding and thickness	<u>2 1/2 x 8</u>		<u>2 3/4 x 7</u>		„ from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold			
„ if plate iron, breadth and thickness	<u>2 1/2 x 8</u>		<u>2 3/4 x 7</u>		<u>9</u> <u>9</u>			
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>23</u>		<u>23</u>		„ from 3/4ths depth of Hold to lower edge of Sheerstrake			
Frames, Size of Angle Iron, single or double	Inches. In Ship. In Ship.		Inches. In Ship. In Ship.		16ths. In Ship.		Inches. required per Rule.	
„ Reversed Iron, No. to every frame	<u>4</u>	<u>3</u>	<u>7</u>	<u>4</u>	<u>3</u>	<u>7</u>	<u>4</u>	<u>3</u>
Floors, depth and thickness of Floor Plate at mid line	<u>21</u>		<u>20</u>		Butt Straps to outside plating, breadth and thickness			
„ Ditto ditto at Bilge Keelson	<u>8</u>		<u>8</u>		<u>10 1/2 x 2 1/2 x 16</u> <u>29.100</u> <u>9 1/2 x 8 1/2</u> <u>29.10.11</u>			
„ Size of Reversed Angle Iron, and No. Angles at top of Floor Plate	<u>3</u>	<u>2 3/4</u>	<u>6</u>	<u>3</u>	<u>2 3/4</u>	<u>6</u>	Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness	
Beams, Deck (N ^o . <u>46</u>) double Angle Iron, Plate, Tee, or Bulb Iron	<u>4 1/2</u>		<u>7 1/2</u>		<u>20</u> <u>8</u> <u>25</u> <u>9</u>			
„ „ double or single Angle Iron, on upper edge	<u>3</u>	<u>3</u>	<u>5</u>	<u>2 3/4</u>	<u>2 3/4</u>	<u>5</u>	Angle Iron on ditto	
„ „ average space between	Alternate frames		alternate		Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways			
„ Hold, or Lower Deck (N ^o . <u>44</u>) double Angle, Tee, Plate, or Bulb Iron	<u>7 1/2</u>	<u>7</u>	<u>7 1/2</u>	<u>7 1/2</u>	<u>7</u>	<u>7</u>	Diagonal Tie Plates on ditto	
„ „ double or single Angle Iron on upper edge	<u>3</u>	<u>3</u>	<u>6</u>	<u>2 3/4</u>	<u>2 3/4</u>	<u>5</u>	Planksheer, materials and scantlings	
„ „ average space between	Alternate frames		alternate		Waterway ditto ditto			
„ Paddle, sided and moulded, thickness of Plate size of Angle Iron	Nil		Nil		Flat of Upper Deck, thickness and material			
„ Engine	Nil		Nil		„ „ how fastened to Beams			
Keelson, single or double plate, box, or intercostal	<u>25 3/4</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	Ceiling betwixt Decks and in Hold, thickness and material	
„ Size of Plates	<u>7 1/2</u>	<u>7</u>	<u>7 1/2</u>	<u>7 1/2</u>	<u>7</u>	<u>7</u>	Clamps or Spircketting ditto	
„ Size of Angle Irons	<u>4</u>	<u>3 1/2</u>	<u>9 1/2</u>	<u>4 3/4</u>	<u>3 3/4</u>	<u>8</u>	Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness	
„ Side, single or double, plate, box, or intercostal	Nil		Nil		Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams at mid-line			
„ Bilge (No. <u>one</u>) at each Bilge, single, or double, plate, or box	<u>4 1/2</u>	<u>3 1/2</u>	<u>9</u>	<u>4 3/4</u>	<u>3 3/4</u>	<u>8</u>	Stringers in Hold	
Transoms, material <u>Iron</u> or, if none, in what manner compensated for.	Nil		Nil		Flat of Lower Deck, thickness and material			
Knight-heads, and Hawse Timbers <u>Iron</u>	Nil		Nil		Main piece of Rudder, diameter at head			
The Frames extend in one length from <u>Keel</u> to <u>funnals</u> rivetted through plates with (3/4 in.) rivets, about (6 in.) apart.	Nil		Nil		„ „ „ at heel			
The reverse angle irons on the floors extend in one length across the middle line from <u>Keelson</u> to <u>hold beam stringer</u>	Nil		Nil		(Can the Rudder be unshipped afloat) <u>Yes</u>			
Keelson, how are the various lengths of plates or angle irons connected? <u>angle irons and butt straps</u>	Nil		Nil		Bulkheads, N ^o . <u>one</u> Thickness of <u>6/16</u>			
Plates, Garboard, double or rivetted to keel, double or at upper edge, with rivets (1/6 x 3/4 ins.) diameter, averaging (4 1/2 in.) apart.	Nil		Nil		„ Height up <u>upper Deck</u>			
„ Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.	Nil		Nil		„ how secured to the sides of the ship <u>between double frames</u>			
„ Butts from Keel to turn of bilge, worked carvel with butt straps (10 1/2/16) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (4 1/2 ins.) apart.	Nil		Nil		„ size of vertical angle irons <u>3 x 2 3/4 x 6</u> and their distance apart <u>2/6</u>			
„ Edges from bilge to sheerstrake, worked carvel with a living piece () thick, or clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 in.) apart.	Nil		Nil		Do the butt straps lap over and rivet through the lands of the strake below? <u>Yes at alternate strakes</u>			
„ Edges of Sheerstrake, double or single rivetted? At upper edge <u>and</u> At lower edge <u>double</u>	Nil		Nil		Do the butt straps lap over and rivet through the lands of the strake below? <u>Yes at each inner strake</u>			
„ Butts from bilge to planksheers, worked carvel with butt straps (29.10/16) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart. Breadth of laps in double rivetting (4 1/2 to 5) Breadth of laps in single rivetting (Nil)	Nil		Nil		Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? <u>double; stringers overlapped and treated</u>			
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? <u>double; stringers overlapped and treated</u>	Nil		Nil		Planksheer, how secured to the plating of the sides <u>Explain by sketch</u>			
Planksheer, how secured to the plating of the sides <u>Explain by sketch</u>	Nil		Nil		Waterway „ „ planksheer and to the Beams <u>if necessary.</u> <u>Gutter funnals</u>			
Waterway „ „ planksheer and to the Beams <u>if necessary.</u> <u>Gutter funnals</u>	Nil		Nil		Deck Beams, how secured to the side? <u>ends turned down and rivetted to frames</u>			
Deck Beams, how secured to the side? <u>ends turned down and rivetted to frames</u>	Nil		Nil		Hold or Lower Deck ditto <u>Do</u> <u>Do</u> <u>Do</u> <u>Do</u>			
Hold or Lower Deck ditto <u>Do</u> <u>Do</u> <u>Do</u> <u>Do</u>	Nil		Nil		Paddle „ „ <u>Nil</u> No. of breasthooks <u>four</u> crutches <u>four</u>			
Paddle „ „ <u>Nil</u> No. of breasthooks <u>four</u> crutches <u>four</u>	Nil		Nil		What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.?			
What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.?	Nil		Nil		Manufacturer's name or trade mark <u>Bulls and Angles, Hopkins-filter and Co</u>			
Manufacturer's name or trade mark <u>Bulls and Angles, Hopkins-filter and Co</u>	Nil		Nil		We certify that the above is a correct description of the several particulars therein given.			

Builder's Signature Wm Pile & Co Surveyor's Signature Joseph Pile

IRON 444-0242



7195 Ton

Workmanship. Are the lands or laps of the clenwork in all cases in breadth at least five and a half times the diameter of the rivets in double rivetted edges and butts, and at least three and a quarter 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? Single pieces
 Do the holes for rivetting plate to frames, butt straps, 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

Her Masts, Bowsprit, Yards, &c. are in good condition, and sufficient in size and length. (If they are of Iron or Steel give the Scanlings 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 rivetting, quality of Materials, and if stamped with Maker's name.)

Please see Sketch appended M.

will
be
found
in
the
Schedule

No.	She has SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	No.	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
	Fore Sails,	Chain	300	1 9/16	44	1 9/16	44	Bowers	3	23-2-26 23-2-7 20-2-14	23-13-30 23-10-32 21-5-32	23-2-0 23-2-0 19-3-25	23 5/10 23 7/10 20 4/20
	Fore Top Sails,	Hempen Stream Cable	85	10 1/2				Stream	1	10-3-0		10-0-0	
	Fore Topmast Stay Sails,	Hawser	60	7/8				Kedges	2	5-2-14 2-2-21		5-0-0 2-2-0	
	Main Sails,	Towlines	85	8 1/2									
	Main Top Sails,	Warp	85	6 3/4									
	and	All of <u>good</u> quality.											

Her Standing and Running Rigging are sufficient in size and good in quality.

She has one Life Line Long Boat and two others (4 in all.)

The present state of the Windlass is Good Capstan 8 ft and Rudder good Pumps 4 of Metal

Order for Special Survey DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Built under 2.1
 No. 2199 Surveys held 2nd. On the plating during the progress of rivetting and surveyed 1869 Oct
 Date April 8th 1869 while building 3rd. When the beams were in and fastened, and before the decks were laid 8.12.16.20.24.27.30. 9.1.4.7.10
 Order for Ordinary Survey as per 4th. When the ship was complete, and before the plating was finally coated 11.14.19.24.25.26.28. June 1.3
 No. --- Section 18. 5th. After the ship was launched 5.9.16.18.22.24.25
 Date ---

State if she has a Spar Deck No Poop Raised 8 ft or Forecastle Montey or Anchor

General Remarks, This Vessel has been built under a Roof complying with Section 52.

The keel, stem, and stem post are not of the same dimensions as set forth in the Rules but it will be observed that the sectional area of those at the ship are slightly in excess. The angle irons to middle line keelson come under the same conditions as the above. Viz.

Sectional area of keel, $\frac{49}{16} \times \frac{44}{16} \times \frac{7}{4}$	=	at ship	320	as Rule	319
D ^o Angles to Middle line keelson, two $\frac{7}{12} \times \frac{9}{2} \times 2$ and $\frac{8}{12} \times \frac{8}{2} \times 2$	=		142 1/2	"	130
Sectional area of the two angle irons that form the Bilge keelson $8 \times 9 \times 2$ and $8 \frac{1}{2} \times 8 \times 2$	=		144	"	136
Sectional area of the stringer plate on ends of Hold Beams $19 \frac{1}{2} \times 8$ and $18 \frac{3}{4} \times 9$	=		156	"	160 3/4
D ^o D ^o on upper Deck Beams $28 \times 8 \frac{1}{2}$ and 25×9	=		224	"	225
Total			986 1/2		984 3/4

Testing Certificates have been produced, issued from the Sunderland testing house, for Anchors and Chains, signed by John Hartness Super

In what manner are the surfaces preserved from oxidation? Inside Cement up to the bilges, and paint above
 Ditto ditto Outside Composition paint on bottom, paint above

I am of opinion this Vessel should be Classed A.I.

The amount of the Fee£ 5 : : : is received by me,
 Special£ 37 : 6 : :
 Certificate (if required)£ : : : :

Joseph M. Allen.
 Surveyor
 Tenhouse Maxtedale In Strou

Committee's Minute 2nd July 1869

Character assigned A

* Should the Committee deem the above as a Compensation for the deficiency in the Hold Beam Stringer plate.
 I am of opinion this vessel is eligible for Committee's favorable consideration to class as above recommended