

IRON SHIPS.

No. 2494 Survey held at West Hartlepool Date 13 June 1865 to 22 February 1866 Recd 26/2/66
 on the Ship "Roman Empire" Master Mathew
 Tonnage under tonnage deck 1467.15 Built at West Hartlepool When built 1866 Launched 16th Jan 1866
 Ditto of Deck Houses or spar deck 610.40
 Ditto of Steering Deck 14.16 By whom built Pile & Sons & Co. Owners George Duncan & Co.
 Total Register tonnage 1542.29 Port belonging to London Destined Voyage London & India
 Gross tonnage
 Surveyed while Building, Afloat, or in Dry Dock While building 1200 ton scale for A1

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.	Nº. of Decks
232	7 1/2		37	11 1/2		23	6 1/2				Two

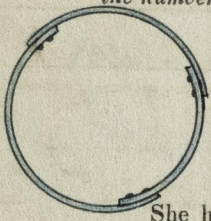
(Dimensions of Ship per Register, length 231.70 breadth 30.00 depth 23.40)

	Inches in Ship.	Inches required per Rule.		Inches in Ship.	Inches required per Rule.
Keel, if bar iron, depth and thickness	10 5/8 x 2 5/8	9 x 3	Plates in Garboard Strakes, breadth and thickness	36	14/16
" if plate iron, breadth and thickness	10 5/8 x 2 5/8	9 x 3	Ditto from Garboard to upper part of Bilges	13/16	13/16
Stem, if bar iron, moulding and thickness	10 5/8 x 2 5/8	9 x 3	" from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold	12/16	12/16
" if plate iron, breadth and thickness	10 5/8 x 2 5/8	9 x 3	" from 3/4ths depth of Hold to lower edge of Sheerstrake	11/16	11/16
Stern-post, if bar iron, moulding and thickness	21	21	" Sheerstrake, breadth and thickness	36	13/16
" if plate iron, breadth and thickness			Butt Straps to outside plating, breadth and thickness	11 x 10	13/16 x 9/16
Distance of Frames from moulding edge to moulding edge, all fore and aft			Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness	30	10/16
Frames, Size of Angle Iron, single or double	5 1/2 x 3/4	9/16	Angle Iron on ditto	5 1/2 x 3/4	9/16
" Reversed Iron, if to every frame or every frame	3 1/2 x 3	9/16	Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways	14 1/2 x 10 1/2	10/16
Floors, depth and thickness of Floor Plate at mid line	25 1/2 x 1 1/16	25 1/2 x 1 1/16	Diagonal Tie Plates on ditto	14 1/2 x 10 1/2	10/16
" Ditto ditto at Bilge Keelson	12 x 1 1/16	12 x 1 1/16	Planksheer, materials and scantlings	14 1/2 x 10 1/2	10/16
" Size of Reversed Angle Iron, and No. one at top of Floor Plate	3 1/2 x 3	9/16	Waterway ditto	14 1/2 x 10 1/2	10/16
Beams, Deck (Nº. 63) double Angle Iron, Plate, Tee, or Bulb Iron	9 x 10 1/16	9 1/2 x 9 1/16	Flat of Upper Deck, thickness and material	4	10/16
" double or single Angle Iron, on edge	4 x 3	9/16	" how fastened to Beams	10 1/16	10/16
" average space between	3 feet 6 in.	3 feet 6 in.	Ceiling betwixt Decks and in Hold, thickness and material	2	10/16
" Hold, or Lower Deck (Nº. 63) double Angle, Tee, Plate, or Bulb Iron	9 x 10 1/16	9 1/2 x 9 1/16	Clamps or Spiketting ditto		
" double or single Angle Iron on edge	4 x 3	9/16	Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness	20 1/2 x 10 1/16	24 3/4 x 11/16
" average space between	3 feet 6 in.	3 feet 6 in.	Stringer or Tie Plates fore and aft, outside Hatchways, on Hold or Lower Deck Beams	14 3/4 x 10 1/16	14 1/4 x 11/16
" Paddle, sided and moulded, thickness of Plate size of Angle Iron			Stringers in Hold	5 x 4	5 1/2 x 4 1/2
Engine			Flat of Lower Deck, thickness and material	3	10/16
Keelson, single or double plate, box, or intercostal	24 x 1 1/16	20 x 1 1/16	Main piece of Rudder, diameter at head	6 1/2	6 1/2
" Size of Plates	17 x 1 1/16	17 x 1 1/16	" " " at heel	8 1/2	8 1/2
" Size of Angle Irons	2 1/2 x 3/4	20 x 1 1/16	(Can the Rudder be unshipped afloat)		
" Side, single or double, plate, box, or intercostal	4 x 3/4	3 1/2 x 3/4	Bulkheads, Nº. 2 Thickness of		7/16
" Bilge (Nº. one) at each Bilge	9 x 9 1/16	6 x 6 1/16	" Height up		7/16
Transoms, material	Plate		" how secured to the sides of the ship		Double frames & broad beams
Knight-heads, and Hawse Timbers	Blocks of oak		" size of vertical angle irons	4 x 3 x 1/4	and their distance apart 30 in forward & 33 aft
The Frames extend in one length from	Keel	to Gunwale			
The reverse angle irons on the floors extend in one length across the middle line from	top of bilge	to top of bilge			
" " " on the frames	"	from bilge to above hold beam stringers & alternately to gunwale			
Keelson, how are the various lengths of plates or angle irons connected?	butts shifted & stepped & rivetted				
Plates, Garboard, double or		rivetted to keel, double or			
" Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (7/16 in.) diameter, averaging (2 3/4 in.) apart.					
" Butts from Keel to turn of bilge, worked carvel with butt straps (11 x 1 3/16) thick, double or single rivetted; with rivets (7/16 in.) diameter, averaging (2 3/4 in.) apart.					
" Edges from bilge to sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single rivetted; with rivets (7/16 in.) diameter, averaging (2 5/8 in.) apart.					
" Edges of Sheerstrake, double or single rivetted? At upper edge	Double Single	At lower edge	Double		
" Butts from bilge to planksheers, worked carvel with butt straps (10 x 1 1/16) thick, double or single rivetted; with rivets (7/16 in.) diameter, averaging (2 3/4 in.) apart. Breadth of laps in double rivetting (6) Breadth of laps in single rivetting (none)					
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?	Double rivetted				
Planksheer, how secured to the plating of the sides	Explain by sketch				
Waterway " " planksheer and to the Beams	if necessary,				
Deck Beams, how secured to the side?	Beam ends turned & knees welded				
Hold or Lower Deck ditto	Same as Deck				
Paddle " "					
What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.?	Good				
Manufacturer's name or trade mark	Balefroy & Co. Stockton-on-Tees				
We certify that the above is a correct description of the several particulars therein given.					
Builder's Signature	Matthew				
Surveyor's Signature	S. P. G. G. G.				

4562 - Iron

Workmanship. Are the lands or laps of the clenchwork 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? 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 in most lengths
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? All through
Are there any rivets which either break into or have been put through the seams or butts of the plating? A few 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 rivetting, quality of Materials, and if stamped with Maker's name.)



Fore & Main masts made with three plates double rivetted at edges & butts laps of edges 5 in, 3/4 rivets spaced 2 3/4 in. Top masts of plates 0/16 at deck tapered to 7/16 at head & heels, length 110 + 90 ft. rig actively. length of plates 9 ft. Diameter at deck 32 in. head 22 heels 26. Mizzen mast made with two plates 0/16 at deck tapered to 7/16 double rivetted at butts & edges with 3/4 rivets spaced 2 3/4 length 01 ft.

She has SAILS.

CABLES, &c.

ANCHORS, and their weights.

		Fathoms.	Inches.	Tested to.		No.	Weight.	Tested to.
Fore Sails,	Chain	300	1 7/8	63 1/4	Bowser	2	39-0-20	Not tested
Fore Top Sails,	Stream Cable	90	1	10	Provided	2	29-2-0	
Fore Topmast Stay Sails,	Hawser	90	11		Stream, Including Stocks	1	12-1-2	14-2-0
Main Sails,	Towlines	90	12		Kedges,	2	6-7-6	8-6-1
Main Top Sails,	Warp	90	7 1/2				3-2-0	5-10-0
	All of <u>Good</u> quality.	90	7 1/2					

Her Standing and Running Rigging One Samp & Single sufficient in size and Good in quality.

She has Two life

Long Boat

Butter Stiff & Gaff

The present state of the Windlass is Leak Capstan 3 of Iron and Budder Good Pumps 3 of 7 1/2 Castal 2 of 5 in Brass

Order for Special Survey	DATES of	1st.	On the several parts of the frame, when in place, and before the plating was wrought
No. <u>230</u>	Surveys held	2nd.	On the plating during the progress of rivetting
Date <u>5th July 1866</u>	while building	3rd.	When the beams were in and fastened, and before the decks were laid
Order for Ordinary Survey	as per	4th.	When the ship was complete, and before the plating was finally coated
No. _____	Section 18.	5th.	After the ship was launched
Date _____			

State if she has a Spar Deck

—Poop—

Forecastle & Deck Houses

General Remarks. Diameter at deck 27 in. keel 21 head 16 1/2. Bowsprit made with two plates, at right head 0/16, at head & heel 7/16 double rivetted at butts & edges with 3/4 rivets. Two angle Irons inside 5 x 3 1/2 x 9/16. Main & fore yards made with two plates 6/16 at middle tapered to 4/16 at end, single rivetted at edges double do. at butts 5/8 rivets spaced 2 1/2 in. three angle Irons inside 3 x 3 x 6/16.

Forecastle, & Deck houses aft & midships. Frames of fore-castle all to the top height. Beams 7 1/2 x 9/16 built plates double angle Irons on top. Edges 3 1/2 x 3 x 6/16. Stringers on ends of 29 x 0/16. Plating 6/16 single rivetted at edges double do. at butts 3/4 rivets spaced 2 1/4. Deck 3/4 Pine Waterways 6 x 11 ght & leak.

Intercostal Keelsons fitted on each side between centre line & bulge Keelsons. Plates 26 x 1/16 double angle Iron 6 x 4 1/2 x 10/16 & 5 x 4 1/2 x 10/16

Deck house aft 43 ft long 22 ft broad 6 ft 10 in high planked with angle Irons. Planked with R. Pine & covered with leak. house in midships 31 ft 17 ft 6 ft 10 in planked & planked the same.

Extra stringers fitted to reverse bars 5 ft below hold beams double angle Irons 5 x 4 x 10/16 with built plate between 9 x 9/16 for 3/5 of the reverse length. Stringer between decks double angle Irons 5 x 4 x 10/16 from after bulkhead thence forward built plates fitted between bulge Keelsons & hold stringer angle Irons 9 x 9/16 from aft of middle

In what manner are the surfaces preserved from oxidation? Inside Not cemented with Portland cement to upper
Ditto ditto Outside part of bulges other parts coated with three coats of paint. Bottom coated with McInnes's

I am of opinion this Vessel should be Classed A

The amount of the Fee £ 5 : 0 : 0 is received by me,

Special £ 77 : 2 : 0

Certificate (if required) £ : : :

Committee's Minute 27th February 1866

Character assigned A / A + C.P

The History of this Iron Sailing Ship appears eligible for Classification as recommended above.

