

IRON SHIPS.

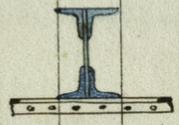
No. 1572/66

No. 2487 Survey held at Stockton Date 25th March 65 to 10th February 1866
 on the S.S. SADO Master Edward Scott
 Tonnage under tonnage deck 392.26 Built at Stockton When built 1866 Launched 4th Jan'y. 66.
 Ditto of poop or spar deck 40.82 By whom built Richardson's & Co. Owners Francis José Pereira
 Ditto of engine room 108.2 Port belonging to London Destined Voyage Spain
 Total Register tonnage 324.88
 Gross tonnage 433.08
 Surveyed while Building, Afloat, or in Dry Dock While Building for 300 Tons Scale A grade

Length aloft 170 - Extreme Breadth 25 - Depth from top of Upper Deck Beam to top of Floor 13 6 Power of Engines 80 Horse. No. of Decks one

(Dimensions of Ship per Register, length 170-6 breadth 25-0 depth 13-9)

	Inches in Ship.		Inches required per Rule.		Inches in Ship.		Inches required per Rule.	
	Inches.	16ths.	Inches.	16ths.	Inches.	16ths.	Inches.	16ths.
Keel, if bar iron, depth and thickness	<u>7 1/2</u>	<u>2</u>	<u>6 1/2</u>	<u>2 1/4</u>				
Stem, if bar iron, moulding and thickness	<u>7 1/2</u>	<u>2</u>	<u>6 1/2</u>	<u>2 1/4</u>				
Stern-post, if bar iron, moulding and thickness	<u>3 1/2</u>	<u>8 1/2</u>	<u>6 1/2</u>	<u>4 1/2</u>				
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>23</u>		<u>23</u>					
Frames, Size of Angle Iron, single or double	<u>3 1/2</u>	<u>2 1/2</u>	<u>3 1/4</u>	<u>2 3/4</u>				
Floors, depth and thickness of Floor Plate at mid line	<u>16</u>	<u>7/16</u>	<u>16</u>	<u>7/16</u>				
Beams, Deck (No. 44) double Angle Iron, Plate, Tee, or Bulb Iron	<u>6 1/2</u>	<u>6/16</u>	<u>6 1/4</u>	<u>6/16</u>				
Keelson, single or double plate, bar, or intercostal	<u>10 1/2</u>	<u>9/16</u>	<u>10 1/2</u>	<u>9/16</u>				



Plates in Garboard Strakes, breadth and thickness 24 9/16 24 9/16
 Ditto from Garboard to upper part of Bilges 8/16 8/16
 " from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold 7/16 7/16
 " from 3/4ths depth of Hold to lower edge of Sheerstrake 6/16 6/16
 " Sheerstrake, breadth and thickness 27 9/16 24 9/16
 Butt Straps to outside plating, breadth and thickness 9 9/16 8 1/4 9/16
 Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness 27 9/16 24 9/16
 Angle Iron on ditto 3 1/2 3 3 1/2 3
 Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways 10 1/2 7/16 9 3/8 7/16
 Diagonal Tie Plates on ditto 4 7/16 9 3/8 7/16
 Planksheer, materials and scantlings gutter
 Waterway ditto ditto gutter
 Flat of Upper Deck, thickness and material 3 4 3
 " " how fastened to Beams 8/16 iron
 Ceiling betwixt Decks and in Hold, thickness and material 2 12
 Clamps or Spirketting ditto ditto
 Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness 10 9/16 10 9/16
 Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams 4 3 3 1/2 3
 Stringers in Hold ditto
 Flat of Lower Deck, thickness and material ditto
 Main piece of Rudder, diameter at head 4 1/2 4 1/4
 " " " at heel 2 1/2 2 1/2
 (Can the Rudder be unshipped afloat yes)
 Bulkheads, No. 4 Thickness of 5/16 5/16
 " Height up to main deck
 " how secured to the sides of the ship Double frames & broad beams
 " size of vertical angle irons 2 1/2 x 2 1/2 and their distance apart 30
 " rivetted through plates with 3/4 in. rivets, about 6 in. apart.
 " 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 top of Bilge to gunwale on every frame for 3/4 length
 " how are the various lengths of plates or angle irons connected? Butts shifted strapped and rivelled.
 " plates, Garboard, double rivetted to keel, double rivetted at upper edge, with rivets 3/4 ins. diameter, averaging 2 1/4 in. apart.
 " Edges from Garboards to upper part of bilge, worked clencher, double rivetted; with rivets 3/4 in. diameter, averaging 2 1/4 ins. apart.
 " Butts from Keel to turn of bilge, worked carvel with butt straps 9 x 3/8 thick, double rivetted; with rivets 3/4 in. diameter, averaging 2 3/4 ins. apart. Do the butt straps lap over and rivet through the lands of the strake below? no
 " Edges from bilge to sheerstrake, worked carvel with a lining piece single thick, as clencher, double or single rivetted; with rivets 3/8 in. diameter, averaging 2 1/4 in. apart. Do the butt straps lap over and rivet through the lands of the strake below? no
 " Edges of Sheerstrake, double or single rivetted? At upper edge single to iron Bulwarks At lower edge Doubles
 " Butts from bilge to planksheers, worked carvel with butt straps 7 1/2 x 6 7/8 thick, double rivetted; with rivets 5/8 in. diameter, averaging 2 1/2 ins. apart. Breadth of laps in double rivetting 4 1/2 Breadth of laps in single rivetting 2 1/4
 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 Gutter Waterways
 Deck Beams, how secured to the side? Beam ends turned and knees welded
 Hold or Lower Deck ditto ditto
 Riddle " " No. of breasthooks 3 crutches 2
 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 "Hopkins" - "Fox Head & Co"
 We certify that the above is a correct description of the several particulars therein given.
 Builder's Signature FOR RICHARDSONS. DENTON. Surveyor's Signature James Tindley

4574 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? 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? single solid pieces
Do the holes for rivetting plate to frames, butt straps, 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? sufficiently countersunk
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.)

General Remarks continued - The Engine and Boiler casings of cast $\frac{3}{16}$ plates. carried up to Bridge deck forming an Iron deck House 30 feet 6 ins long x 7 feet 6 ins x 16 feet 10 ins the full length of Bridge

SAILS.			CABLES, &c.			ANCHORS, and their weights.		
N ^o .			Fathoms.	Inches.	Tested to Tons.	N ^o .	Weight. Ex. Stock	Tested to Tons.
Fore Sails,	Chain	.....	210	1 7/8	22 3/4	Bowers,	3	9.3.10 11 1/20
Fore Top Sails,	Hemp Stream Cable	.....	90	10/16				0.3.10 11 1/20
Fore Topmast Stay Sails,	Hawser	.....	90	8				8.0.18 10 1/20
Main Sails,	Towlines	.....	90	5		Stream, <u>stock included,</u>		4.3.0 6 1/20
Main Top Sails,	Warp	.....	60	4 1/2		Kedges,	2	2 1.24 1.0.44
	All of <u>good</u> quality.							

Her Standing and Running Rigging Wide Hemp Manila sufficient in size and good in quality.
She has one Solly Boat, one Life Boat and one Pinnace and one gig
The present state of the Windlass is S.O. Capstan --- and Rudder good Pumps 3 - 2 6 ins Iron Chamber 1.4 1/2

Order for Special Survey	DATES of	1st.	2nd.	3rd.	4th.	5th.
No. <u>2244</u>	Surveys held	On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the progress of rivetting	When the beams were in and fastened, and before the decks were laid	When the ship was complete, and before the plating was finally coated	After the ship was launched
Date <u>21st March 65</u>	while building	<u>See</u>	<u>three coats</u>	<u>work</u>	<u>while Building</u>	<u>special Survey</u>
Order for Ordinary Survey	as per					
No. <u>---</u>	Section 18.					
Date <u>---</u>						

State if she has a Spar Deck --- Poop --- or Forecastle ---

General Remarks, she is fitted with a full poop. all frames to top height - plating $\frac{5}{16}$, single Rivetted at edges and double at Butts with $\frac{5}{8}$ Rivets $2\frac{1}{4}$ apart. Beams of Iron Bars of angle Iron. Rivetted back to back one $4\frac{1}{2} \times 3 \times \frac{7}{16}$ other $2\frac{1}{2} \times 2\frac{1}{2} \times \frac{5}{16}$. Stringer plate on beam ends $20\frac{1}{2} \times \frac{7}{16}$. with an angle Iron on top. $4 \times 3 \times \frac{4}{16}$ Lie plates. $7\frac{1}{2} \times \frac{7}{16}$. Decks of $\frac{1}{2}$ T. $2\frac{1}{2}$ plated with $\frac{9}{16}$ Bar Iron top. Waterways of $\frac{1}{2}$ T. $10 \times 4\frac{3}{4}$.
In lieu of Hold Beams she is fitted with a border stringer $10 \times \frac{11}{16}$. for three thirds vessels length remainder $10 \times \frac{11}{16}$. four Bars of angle Iron $3\frac{1}{2} \times 3 \times \frac{4}{16}$. the two outer Bars of the Rivetted to the Reverse Bars which extend to gunwales on frame for three thirds vessels length amidships - see Secretary letter 9th March 65 - the length being over 12 Depths - sheers are increased $\frac{2}{16}$ for $\frac{3}{4}$ length amidships - the gunwale stringer increased $\frac{2}{16}$ for half length and a Rubb. Iron $6\frac{1}{2} \times \frac{4}{16}$ is fitted three barge angle Iron for same length. Wash plates $\frac{1}{16}$ thick fitted in Engine or Boiler space at middle line - the frames are doubled to Bilges for half length amidships - the 23 inch spacing having been adopted. (see above)

In what manner are the surfaces preserved from oxidation? Inside Bottom cemented all other work inside
Ditto ditto Outside and out with three coats of paint

I am of opinion this Vessel should be Classed B 1.
The amount of the Fee £ 5 : 0 : 0 is received by me,
Feb 1865 Special £ 21 : 13 : 0
Certificate (if required) £ : : James Purdie

FOR RICHARDSONS, DENTON,
DUCK & COMPANY LIMITED
John Protheroe Sec.
This has been examined and approved for Classification as recommended by Lloyd's Register Foundation

Committee's Minute 16th February 1866
Character assigned B 1

Handwritten signatures and initials at the bottom of the page.