

## IRON SHIP. 23153

No. 194/78

No. 4166 Survey held at Stockton Date, First Survey 20<sup>th</sup> Sept 78 Last Survey 28<sup>th</sup> March 1879On the Screw Steamer "Harter"Master J BranthwaiteTONNAGE under Tonnage Deck 1782.04

ONE, OR TWO DECKED, THREE DECKED VESSEL.

Ditto of Third Spar, or Awning Deck.

SPAR, OR AWNING DECKED VESSEL.

Ditto of Prop, or Mast.

HALF BREADTH (moulded) 17.3 Feet.Ditto of Houses on Deck 58.65DEPTH from upper part of Keel to top of Upper Deck Beams 26.6Ditto of Forecastle 79GIRTH of Half Midship Frame (as per Rule) 59.10Gross Tonnage 1844.411st NUMBER 83.7Less Crew Space 58.201st NUMBER, if a THREE-DECKED VESSEL 76.7Less Engine Room 590.21LENGTH 279.5 (deduct 7 feet)Register Tonnage 1196.02nd NUMBER 21409PROPORTIONS—Breadths to Length under nineDepths to Length—Upper Deck to Keel under elevenMain Deck ditto under fifteenBuilt at StocktonWhen built 1879 Launched 8<sup>th</sup> FebBy whom built Richardson & CoOwners J H BushbyPort belonging to LondonDestined Voyage China

If Surveyed while Building, Afloat, or in Dry Dock.

Special Survey while building &amp; afloat in Sea

LENGTH on deck as per Rule 279 Feet. 6 Inches. BREADTH Moulded 34 Feet. 6 Inches. DEPTH top of Floors to Upper Deck Beams 24 Feet. 6 Inches. Do. do. Main Deck Beams 17 Feet. 1 Inch. Power of Engines 300 Horse. N<sup>o</sup>. of Decks with flat laid Two N<sup>o</sup>. of Tiers of Beams ThreeDimensions of Ship per Register, length, 280.5 breadth, 34.8 depth, 24.3

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	$9\frac{1}{2} \times 2\frac{1}{2}$	$9\frac{1}{2} \times 2\frac{1}{2}$
STEM, moulding and thickness	$9 \times 2\frac{1}{2}$	$9 \times 2\frac{1}{2}$
STERN-POST for Rudder do. do.	$9 \times 5$	$9 \times 5$
" " for Propeller	$9 \times 5$	$9 \times 5$
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>24</u>	<u>24</u> (Class 100A)

	Inches in Ship.	Inches per Rule.
FRAMES, Angle Iron, for $\frac{3}{4}$ length amidships	$5 \times 3 \times 8$	$5 \times 3 \times 8$
Do. for $\frac{1}{2}$ at each end	$5 \times 3 \times 7$	$5 \times 3 \times 7$

REVERSED FRAMES, Angle Iron  $5\frac{1}{2} \times 3 \times 8$   $5\frac{1}{2} \times 3 \times 8$ 

	Inches in Ship.	Inches per Rule.
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	$24 \times 9\frac{1}{2}$	$24 \times 9\frac{1}{2}$
" thickness at the ends of vessel	$12 \times 7$	$12 \times 7$
" depth at $\frac{3}{4}$ the half-bdth. as per Rule	$48 \times 48$	$48 \times 48$

	Inches in Ship.	Inches per Rule.
BEAMS, Upper, Spar, or Awning Deck Single or double Angle Iron, Plate or Tee Bulb Iron	$7 \times 7 \times 7$	$7 \times 7 \times 7$
Single or double Angle Iron on Upper edge	$3 \times 3 \times 6$	$3 \times 3 \times 6$
Average space	$48$	$48$

	Inches in Ship.	Inches per Rule.
BEAMS, Main, or Middle Deck Single or double Angle Iron, Plate or Tee Bulb Iron	$8\frac{1}{2} \times 8 \times 8$	$8\frac{1}{2} \times 8 \times 8$
Single, or double Angle Iron, on Upper Edge	$6 \times 3 \times 8$	$6 \times 3 \times 8$
Average space	$24$	$24$

	Inches in Ship.	Inches per Rule.
BEAMS, Lower Deck, Hold, or Orlop Single or double Angle Iron, Plate or Tee Bulb Iron	$9\frac{1}{2} \times 8 \times 8$	$9\frac{1}{2} \times 8 \times 8$
Single or double Angle Iron on Upper Edge	$4 \times 4 \times 8$	$4 \times 4 \times 8$
Average space	<u>See elevation</u>	<u>See elevation</u>

	Inches in Ship.	Inches per Rule.
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	$18 \times 13$	$18 \times 13$
" Rider Plate	$12 \times 13$	$12 \times 13$
" Bulk Plates Intercoastal Keelson	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$
" Angle Irons	$8\frac{1}{2} \times 8 \times 8$	$8\frac{1}{2} \times 8 \times 8$
" Double Angle Iron Side Keelson	$24 \times 8$	$24 \times 8$
" Side Intercoastal Plate	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$
" do. Angle Irons	$3\frac{1}{2} \times 3 \times 8$	$3\frac{1}{2} \times 3 \times 8$
" Attached to outside plating with angle iron		

	Inches in Ship.	Inches per Rule.
BILGE Angle Irons	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$
" do. Bulb Iron	$8\frac{1}{2} \times 8 \times 8$	$8\frac{1}{2} \times 8 \times 8$
" do. Intercoastal plates riveted to plating for length		

	Inches in Ship.	Inches per Rule.
BILGE STRINGER Angle Irons	$5\frac{1}{2} \times 4 \times 9$	$5\frac{1}{2} \times 4 \times 9$
Intercoastal plates riveted to plating for $\frac{1}{2}$ length.	$10 \times 8$	$10 \times 8$

	Inches in Ship.	Inches per Rule.
SIDE STRINGER Angle Irons	$8\frac{1}{2} \times 3 \times 8$	$8\frac{1}{2} \times 3 \times 8$

Transoms, material. Knight-heads. Hawse Timbers. IronWindlass Starfield Pall Bitt IronThe FRAMES extend in one length from Keel to GunwaleThe REVERSED ANGLE IRONS on floors and frames extend across middle line to top of main deck stringer angle iron and to Gunwale alternatelyKEELSONS. Are the various lengths of Plates and Angle Irons properly connected? Yes And butts properly shifted? YesPLATING. Garboard, double riveted to Keel, with rivets  $\frac{1}{8}$  in. diameter, averaging  $5\frac{1}{2}$  ins. from centre to centre.Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets  $\frac{7}{8}$  in. diameter, averaging 4 ins. from centre to centre.Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets  $\frac{7}{8}$  in. diameter averaging 4 ins. from centre to centre.Butts of three Strakes at Bilge for  $\frac{1}{2}$  length, treble riveted with Butt Straps  $\frac{1}{16}$  thicker than the plates they connect.Edges from bilge to Main Sheerstrake, worked clencher, double single riveted; with rivets  $\frac{7}{8}$  in. diameter, averaging 4 ins. from cr. to cr.Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets  $\frac{7}{8}$  in. diameter, averaging 4 ins. from cr. to cr.Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.Butts of Main Sheerstrake, treble riveted for  $\frac{1}{2}$  length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.Butts of Main Stringer Plate, treble riveted for  $\frac{1}{2}$  length amidships. Butts of Upper Spar Stringer Plate, treble riveted for  $\frac{1}{2}$  length.Breadth of laps of plating in double riveting  $5\frac{1}{4}$  Breadth of laps of plating in single riveting —Butt Straps of Keelsons, Stringer and Tie Plates, treble double Riveted? angle iron properly shifted & strappedWaterway, how secured to Beams — (Explain by Sketch, if necessary.)Beams of the various Decks, how secured to the sides? bolts & brackets & knees riveted No. of Breasthooks, Six Crutches, NoneWhat description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Bowenfield's, bestManufacturer's name or trade mark, Marsh & Stockton Malleable Co

The above is a correct description.

Builder's Signature, Richardson & Co Surveyor's Signature, M. H. Davidson

Surveyor to Lloyd's Register of British and Foreign Shipping.

	Inches in Ship.	16ths in Ship.	Inches per Rule.	16ths per Rule.
Flat Keel Plates, breadth and thickness	<u>36</u>	<u>12</u>	<u>36</u>	<u>12</u>
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	<u>36</u>	<u>12</u>	<u>36</u>	<u>12</u>
" of doubling at Bilge, or increased thickness, and length applied <u>between</u>	<u>107 11</u>	<u>attenuity</u>	<u>107 11</u>	<u>attenuity</u>
" fm up. part of Bilge to l. edge of Sh'rstrake.				
" Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake	<u>40</u>	<u>13</u>	<u>40</u>	<u>13</u>
" Up. or Spar Dk Sh'rstrake, brdth & thickness	<u>40</u>	<u>13</u>	<u>40</u>	<u>13</u>
Butt Straps to outside plating, breadth & thickness	<u>6 1/4</u>	<u>11 1/4</u>	<u>14.2</u>	<u>11.1</u>
Lengths of Plating	<u>120</u>		<u>120</u>	
Shifts of Plating, and Stringers	<u>48</u>		<u>48</u>	
Gunwale Plate on ends of <u>Awning</u> Spar	<u>60</u>	<u>9</u>	<u>60</u>	<u>9</u>
Upper Deck Beams, breadth and thickness	<u>40</u>	<u>13</u>	<u>40</u>	<u>13</u>
Angle Iron on ditto	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
Tie Plates fore and aft, outside Hatchways	<u>14</u>	<u>9</u>	<u>14</u>	<u>9</u>
Diagonal Tie Plates on Beams No. of Pairs,	<u>—</u>		<u>—</u>	
Planksheer material and scantling	<u>—</u>		<u>—</u>	
Waterways do. do. <u>cutters</u>	<u>—</u>		<u>—</u>	
Flat of Upper Deck do. do.	<u>4</u>		<u>4</u>	
How fastened to Beams <u>bolts &amp; nuts below</u>	<u>40</u>	<u>10</u>	<u>40</u>	<u>10</u>
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	<u>40</u>	<u>10</u>	<u>40</u>	<u>10</u>
Is the Stringer Plate attached to the outside plating? <u>Yes</u>			<u>Yes</u>	
Angle Irons on ditto, No. <u>Two</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
Tie Plates, outside Hatchways	<u>14</u>	<u>9</u>	<u>14</u>	<u>9</u>
Diagonal Tie Plates on Beams, No. of pairs	<u>—</u>		<u>—</u>	
Waterways materials and scantlings	<u>—</u>		<u>—</u>	
Flat of Middle Deck do. do. <u>None</u>	<u>6</u>		<u>6</u>	
How fastened to Beams <u>Direct</u>	<u>10</u>		<u>10</u>	
Stringer Plates on ends of <u>Lower Deck, Hold or Orlop</u> Beams	<u>37</u>	<u>9</u>	<u>37</u>	<u>9</u>
Is the Stringer Plate attached to the outside plating? <u>Yes</u>			<u>Yes</u>	
Angle Irons on ditto, No. <u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
Stringer or Tie Plates, outside Hatchways	<u>5 1/2</u>	<u>4</u>	<u>5 1/2</u>	<u>4</u>
Flat of Lower Deck	<u>—</u>		<u>—</u>	
Ceiling betwixt Decks, thickness and material <u>betwixt 2 1/2</u>			<u>2 1/2</u>	
" in hold do. <u>do. 2 1/2</u>			<u>2 1/2</u>	
Main piece of Rudder, diameter at head <u>8 3/4</u>			<u>8 3/4</u>	
do. at heel <u>5 1/2</u>			<u>5 1/2</u>	
Can the Rudder be unshipped afloat? <u>Yes</u>				
Bulkheads No. <u>5</u> Thickness of plates <u>7 1/2</u>			<u>7 1/2</u>	
" Height up <u>Fore to upper deck other main decks</u>				
" How secured to sides of ship <u>Double frames</u>				
" Size of Vertical Angle Irons <u>3 1/2 x 8</u> and distance apart <u>30</u> ins.				
" Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>				

IRON 483-0494



Workmanship. Are the butts of plating planed or otherwise fitted? *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*

Are the fillings between the ribs and plates solid single pieces? *Yes*

Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *Yes* 23153 *over*

Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? *Yes*

Do any rivets break into or through the seams or butts of the plating? *Yes several in Butts at Steam Riveting*

Masts, Bowsprit, Yards, &c., are *Iron & Wood* in *good* condition, and sufficient in size and length. If of Iron or Steel give 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 riveting, quality of Materials, and if stamped with Maker's name.

State also Length and Diameter of Lower Masts and Bowsprit

*Masts finished with Pitch pine pole 6 feet above Row and are constructed in accordance with Submitted and approved plans*  
*Fore Mast Length Extreme 119' 3" Main Mast Length 111' Plates tees Cold Iron from Bowfield*

NUMBER for EQUIPMENT *24930*

	Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate	Weight req'd per Rule.	Test req'd per Rule.
SAILS.						Bowers	3	32-2.22	30.13.3.0	32.0.0	30 2/20
Fore Sails.	135.22	1 1/8	59 1/8 Tons	270-1 1/8	59 1/8 Tons			31.2.20	29.18.3.0	32.0.0	30 2/20
Fore Top Sails.	134.5	5	82 3/4		82 3/4			29.3.24	29.2.1.0	29.0.23	26 10/20
Fore Topmast Stay Sails.											
Main Sails.											
Main Top Sails.											
and other as req'd											

Standing and Running Rigging *Wire & Manilla* sufficient in size and *good* in quality. She has *Two Life Lines* Boats and *two others*

The Windlass is *Hampden* Capstan *Iron* and Rudder *Iron* Pumps *Iron* & *good*

Engine Room Skylights.—How constructed? *Teak & Bulls Eyes* How secured in ordinary weather? *Hinges*

What arrangements for deadlights in bad weather? *Lanterns*

Coal Bunker Openings.—How constructed? *Iron* How are lids secured? *Batten & Screws* Height above deck? *18"*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Twenty nine feet of bulwark from Stem aft and twenty one feet of bulwark from Stem post forward Stem plates thence Open bulwark to Bridge & from Bridge forward*

Cargo Hatchways.—How formed? *Iron rounded corners*

State size Main Hatch *24' x 10'* Fore hatch *12' x 8'* Quarter hatch *16' x 10' & 8' x 8'*

If of extraordinary size, state how framed and secured? *Deep web plates & Iron fore & aft*

What arrangement for shifting beams? *Web plates fitted and bolted*

Hatches, If strong and efficient? *Yes Solid 3" thick*

Order for Special Survey No. *707*

Date *6<sup>th</sup> Sept 1878*

Order for Ordinary Survey No.

Date

No. *250* in builder's yard.

DATES of Surveys held while building as per Section 18.

- 1st. On the several parts of the frame, when in place, and before the plating was wrought
- 2nd. On the plating during the process of riveting
- 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 or cemented...
- 5th. After the ship was launched and equipped

*Special Survey*

*First Survey 20<sup>th</sup> Sept 78*

*Last Survey 28<sup>th</sup> March 79*

General Remarks (State quality of workmanship, &c.)

*Good*

*Is finished in accordance with the Midship Section and Elevation Submitted - The additions as marked in Red on the Midship Section have been added to the passed Section*

State if ~~one, two, or three~~ decked vessel, or if ~~open, or running~~ decked; and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside *With Cement & Paint* Outside *With Paint*

I am of opinion this Vessel should be Classed *100 A 1*

The amount of the Entry Fee ... £ *5* : - : - is received by me, *1878*

Special ... £ *69* : *13* : - *8<sup>th</sup> April 1879*

Certificate ... : : :

(Travelling Expenses, if any, £ ...)

Committee's Minute

*10<sup>th</sup> April*

*1879.*

Character assigned

*100 A 1*

*100 A 1*

Surveyor to Lloyd's Register of British and Foreign Shipping.



Lloyd's Register Foundation