

IRON SHIP. 16298

No. 11421 Survey held at Sunderland Date, First Survey 18th January 1876 Last Survey 16th May 1876

On the Iron Barge "Mercia" Yard Number 87 Master Bartholomew Walker, Sick.

TONNAGE under Tonnage Deck 731.76
 Ditto of Third, Spar, or Awning Deck. —
 Ditto of Deep, or Raised Qr. Dk. 33.11
 Ditto of Houses on Deck 13.79
 Ditto of Forecastle, House 8.41
 Gross Tonnage 787.07
 Less Crew Space 36.33
 Less Engine Room —
 Register Tonnage as out on Beam 750.74

ONE, OR TWO DECKED, THREE DECKED VESSEL.
SPAR, OR AWNING DECKED VESSEL.
HALF BREADTH (moulded) 15.75
DEPTH from upper part of Keel to top of Upper Deck Beams 20.41
GIRTH of Half Midship Frame (as per Rule) 30.75
1st NUMBER 66.91
1st NUMBER, if a THREE-DECKED VESSEL deduct 7 feet —
LENGTH 176.24
2nd NUMBER 4.787
PROPORTIONS—Breadths to Length 5.5
 Depths to Length—Upper Deck to Keel 8.6
 Main Deck ditto —

Built at Sunderland
 When built 1876 Launched 23rd April 1876
 By whom built Bartram and Haswell
 Owners Paulaud & Sick, Shipowners, Scarborough
 Port belonging to Scarborough
 Destined Voyage —
 # Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule 176 **BREADTH** Moulded 31 **DEPTH** top of Floors to Upper Deck Beams 18 **Feet.** 7 **Inches.** — **Power of Engines** — **Horse.** — **No. of Decks with flat laid** One **No. of Tiers of Beams** Two

Dimensions of Ship per Register, length, 186ft breadth, 31ft depth, 18.6ft.

	Inches in Ship.	Inches per Rule.
KEEL , depth and thickness	$7\frac{1}{2} \times 2\frac{1}{4}$	$7\frac{1}{2} \times 2\frac{1}{4}$
STEM , moulding and thickness	$7 \times 2\frac{1}{4}$	$7 \times 2\frac{1}{4}$
STERN-POST for Rudder do. do.	$7 \times 2\frac{1}{4}$	$7 \times 2\frac{1}{4}$
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>22</u>	(Class 100 R.)
FRAMES , Angle Iron, for $\frac{2}{3}$ length amidships	4×3	4×3
Do. for $\frac{1}{3}$ at each end	4×3	4×3
REVERSED FRAMES , Angle Iron	3×3	3×3
FLOORS , depth and thickness of Floor Plate at mid line for half length amidships	$20 \times 8\frac{1}{6}$	$20 \times 8\frac{1}{6}$
thickness at the ends of vessel	$7\frac{1}{6}$	$7\frac{1}{6}$
depth at $\frac{3}{4}$ the half-bdth. as per Rule	$10 \times 8\frac{1}{6}$	$10 \times 8\frac{1}{6}$
height extended at the Bilges	$40 \times 8\frac{1}{6}$	$40 \times 8\frac{1}{6}$
BEAMS , Upper, Spar, or Awning Deck	$7\frac{1}{2} \times 7\frac{1}{6}$	$7\frac{1}{2} \times 7\frac{1}{6}$
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	3×3	3×3
Single or double Angle Iron on Upper edge	$4\frac{1}{2} \times 8\frac{1}{6}$	$4\frac{1}{2} \times 8\frac{1}{6}$
Average space	$4\frac{1}{2}$	$4\frac{1}{2}$
BEAMS , Main or Middle Deck	$7\frac{1}{2} \times 7\frac{1}{6}$	$7\frac{1}{2} \times 7\frac{1}{6}$
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	3×3	3×3
Single, or double Angle Iron, on Upper Edge	$4\frac{1}{2} \times 8\frac{1}{6}$	$4\frac{1}{2} \times 8\frac{1}{6}$
Average space	$4\frac{1}{2}$	$4\frac{1}{2}$
BEAMS , Lower Deck, Hold or Orlop	$7\frac{1}{2} \times 7\frac{1}{6}$	$7\frac{1}{2} \times 7\frac{1}{6}$
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	3×3	3×3
Single or double Angle Iron on Upper Edge	$4\frac{1}{2} \times 8\frac{1}{6}$	$4\frac{1}{2} \times 8\frac{1}{6}$
Average space	$4\frac{1}{2}$	$4\frac{1}{2}$
KEELSONS Centre line, single or double plate, $1\frac{1}{6}$ in. diameter, averaging $5\frac{1}{4}$ ins. from centre to centre.	$12 \times 10\frac{1}{6}$	$12 \times 10\frac{1}{6}$
" Rider Plate	$9\frac{3}{4} \times 10\frac{1}{6}$	$9\frac{3}{4} \times 10\frac{1}{6}$
" Bulb Plate to Intercoastal Keelson	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
" Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
" Double Angle Iron Side Keelson	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
" Side Intercoastal Plate	$16\frac{1}{6}$	$16\frac{1}{6}$
" do. Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
" Attached to outside plating with angle iron	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
BILGE Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
" do. Bulb Iron	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
" do. Intercoastal plates riveted to plating for length	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
BILGE STRINGER Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
Intercoastal plates riveted to plating for length	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$
SIDE STRINGER Angle Irons	$4\frac{1}{2} \times 3$	$4\frac{1}{2} \times 3$

Flat Keel Plates, breadth and thickness 32 9/16 32 9/16
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied 8 1/6 to 7 1/6
 fm up. part of Bilge to lr. edge of Sh'rstrake Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake. Up. or Spar Dk Sh'rstrake, brdth & thickness 16 3/4 to 17 3/4
 Butt Straps to outside plating, breadth & thickness 11 1/6 to 11 1/6
 Lengths of Plating 44 and 58
 Shifts of Plating, and Stringers 44 and 58
 Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness 23 7/16
 Angle Iron on ditto 4 1/2 3 4 1/2 3
 Tie Plates fore and aft, outside Hatchways 10 8 1/6 10 8 1/6
 Diagonal Tie Plates on Beams, No. of Pairs, Two 10 8 1/6 10 8 1/6
 Planksheer material and scantling 3 1 1/2 3 1 1/2
 Waterways do. do. 5 1/4 3 1/2
 Flat of Upper Deck do. do. 5 1/4 3 1/2
 How fastened to Beams By galvanized iron screws bolt and nuts.
 Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness —
 Is the Stringer Plate attached to the outside plating? Yes
 Angle Irons on ditto, No. Two
 Tie Plates, outside Hatchways —
 Diagonal Tie Plates on Beams, No. of pairs —
 Waterways materials and scantlings —
 Flat of Middle Deck do. do. —
 How fastened to Beams —
 Stringer Plates on ends of Lower Deck, Hold or Orlop Beams —
 Is the Stringer Plate attached to the outside plating? Yes
 Angle Irons on ditto, No. Two
 Stringer or Tie Plates, outside Hatchways —
 Flat of Lower Deck —
 Ceiling between Decks, thickness and material 2 1/2 iron
 in hold do. 2 1/2 iron
 Main piece of Rudder, diameter at head 4 1/2
 do. at heel 23 1/4
 Can the Rudder be unshipped afloat? Yes
 Bulkheads No. One Thickness of 6 1/6
 Height up To upper deck
 How secured to sides of ship By two double frames
 Size of Vertical Angle Irons 3 x 3 x 6 1/6 and distance apart 30 ins.
 Are the outside Plates doubled two spaces of Frames in length? Yes

Transoms, material. Knight-heads. Hawse Timbers. Iron
 Windlass Emerson and Walker's Pall Bitt None required

The **FRAMES** extend in one length from middle line to gunwale Riveted through plates with 3/4 in. Rivets, about 5 1/2 apart.

The **REVERSED ANGLE IRONS** on floors and frames extend from near middle line to over and below the stringer and to main plate alternately

KEELSONS. Are the various lengths of Plates and Angle Irons properly connected? Yes And butts properly shifted? Yes

PLATING. Garboard, double riveted to Keel, with rivets 1 1/6 in. diameter, averaging 5 1/4 ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/4 ins. from centre to centre.

Butts of Two Strakes at Bilge for half length, treble riveted with Butt Straps 1 1/6 thicker than the plates they connect.

Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 3/4 in. diameter, averaging 3 1/4 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 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 half length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.

Butts of Main Stringer Plate, treble riveted for half length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.

Breadth of laps of plating in double riveting 4 1/2. Breadth of laps of plating in single riveting 2 1/2.

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble and Double riveted.

Waterway, how secured to Beams (Explain by Sketch, if necessary.) Waterway cemented.

Beams of the various Decks, how secured to the sides? Keels turned down and riveted. No. of Breasthooks, Four Crutches, Four.

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angles and Beams - 160,000 lbs. of 1 1/2 in. plates 5.5 in. x 1/2 in. x 1/2 in. also supplied by the latter firm.

Manufacturer's name or trade mark, Bartram and Haswell

The above is a correct description.

Builder's Signature, For Bartram Haswell & Co Surveyor's Signature, J. Williams

J. Williams

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

Planed

16298 Jan

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

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?

No

Masts, Bowsprit, Yards, &c., are of iron 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 For particulars please see the annexed sketch.

NUMBER for EQUIPMENT 12576

N ^o .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
Two	Fore Sails,	Chain <u>Breaking</u> <u>Shaw</u>	270	1 1/8	43 3/4 tons	270	43 3/4 tons	Bowers	2684	23.2.2	23.10.3.21	23.2.0	23 1/2 tons.
Complete	Fore Top Sails,	(State Machine where Tested, Date, & name of Superintendent.)			6 1 3/5	17 1/6	6 1 3/5		2688	23.3.0	23.13.3.0	23.2.0	23 1/2 tons.
Auto of	Fore Topmast Stay Sails	<u>Hammer Strm Cbl</u>	60	7/8		90-1/8			2685	20.1.21	21.3.3.0	20.0.0	20 tons above
of	Main Sails,	Hawser ...	90	10		10				3.3.7			
and	Main Top Sails,	Towlines ...	90	8		90-8 1/2							
		Warp ...	90	6		90-6 1/2							
		quality <u>Good</u>	90	5									

Standing and Running Rigging Charnal wire, Knip sufficient in size and Good in quality. She has two Long Boats and two others.

The Windlass is Emerald and Walters Capstan Good and Rudder Good. Pumps two Guin Respathe patents.

Engine Room Skylights. How constructed?

How secured in ordinary weather?

What arrangements for deadlights in bad weather?

Coal Bunker Openings. How constructed?

How are lids secured?

Height above deck?

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea?

The large ports in Bulwarks, four Scuppers

Cargo Hatchways. How formed? Iron plates and angle-irons

State size Main Hatch 14 ft 6 ins by 9 ft 6 ins Fore hatch six feet square Quarter hatch six feet square.

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams?

Hatches, If strong and efficient?

Yes.

Order for Special Survey No. 2614

Date 28 January 1876

Order for Ordinary Survey No. —

Date —

No. 84 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

Built under special Survey in accordance with the
1876 Survey in 192426 July 123810
142232478 March 36410 1514 212324783031 April 4611315 152124252629 May 2.5
10121516

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

The workmanship and materials in this vessel
are of very good quality. She is barque rigged, has a raised quarter deck
38 ft 6 ins long, a house on deck abaft main mast 11 ft long by 13 ft wide
and one forward 22 ft 9 ins by 12 ft 8 ins, and a monkey forecastle 23 ft
long.

She has been built under special Survey in accordance with
the scantlings and arrangements shown on the accompanying approved
tracing of midship section, and the Secretary's letter dated the 30th Decr
1875 - and in other respects in accordance with the rules. She is
fitted with a double angle-iron side keelson formed of 4 1/2 x 3 x 7/16
angles, which is in excess of the requirements of the rules.

The iron from which the iron masts, yards, and bowsprit have
been constructed has been submitted to hot and cold smelting tests, and
proved to be of excellent quality. Two specimens bent cold to an
angle of 35° before showing any distress of fibre across the grain, while
a specimen with the grain tested in a similar manner bent
nearly too double without showing any fracture whatever. These specimens
were from four to five inches side. The iron also stood the necessary
rolling to form the masts and yards very well.

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, forecastle or raised quarter deck, or of double or part double bottom.

How are the surfaces preserved from oxidation? Inside Cement and paint

Outside Paint.

I am of opinion this Vessel should be Classed 100 A. I.

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

Special ... £ 37 : 11 : 0 17 May 1876

Certificate given

(Travelling Expenses)

(if any) £ —

Committee's Minute 19 May 1876

Character assigned 100 A. I.

100 A. I.

100 A. I.

100 A. I.

100 A. I.

100 A. I.

100 A. I.

100 A. I.

100 A. I.

This vessel appears eligible to be classed in accordance with 100 A. I. 1876 Lloyd's Register Foundation