

IRON SHIP.

No. 25408 Survey held at Liverpool Date, First Survey March 6th 1876 Last Survey Feb. 6th 1877
 On the S.S. "Hampshire" Yard Number 75 Master J. E. Pearce

TONNAGE under Deck 1395.51
 Ditto of Third, Spar, or Awning Deck 669.07
 Ditto of Peep, or Raised Or. Dk. 2064.58
 Ditto of Houses on Deck 94.69
 Ditto of Forecastle Anchor deck
 Gross Tonnage 2159.27
 Less Crew Space under 25 61.57
House - 31.44
 Less Engine Room 690.97
 Register Tonnage 1375.26
 as cut on Beam

ONE, OR TWO DECKED, THREE DECKED VESSEL.
 SPAR, OR AWNING-DECKED VESSEL.
HALF BREADTH (moulded)... 17.500
DEPTH from upper part of Keel to top of Upper Deck Beams 28.200
GIRTH of Half Midship Frame (as per Rule) 40.458
1st NUMBER 86.158
1st NUMBER, if a **THREE-DECKED VESSEL** 7.000
 deduct 7 feet 79.158
LENGTH 313.96
2nd NUMBER 24852.44
PROPORTIONS—Breadths to Length 8.9
 Depths to Length—Upper Deck to Keel 11.13
 Main Deck ditto 15.11

Built at Liverpool
 When built 1876 Launched Nov. 24/76
 By whom built Messrs R. & J. Evans
 Owners Messrs Chas. Horsfall & Son
 Port belonging to Liverpool
 Destined Voyage Bombay
 If Surveyed while Building, Afloat, or in Dry Dock.
 On the Building ship & in dry dock

LENGTH on deck as per Rule 313 11/2 **BREADTH**—Moulded... 35 0 **DEPTH** top of Floors to Upper Deck Beams 25 11/2 **Power of Engines** 300 **Horse.** 300 **No. of Decks with flat laid** Two and one **No. of Tiers of Beams** Three.

Dimensions of Ship per Register, length, 315.2 breadth, 35.2 depth, 18.4
25.8

KEEL, depth and thickness 10 x 23/4
STEM, moulding and thickness 10 x 23/4
STERN-POST for Rudder do. do. 10 x 5 1/2
 for Propeller 10 x 5 1/2
 Distance of Frames from moulding edge to moulding edge, all fore and aft 24 (Class 100 A)

FRAMES, Angle Iron, for 1/2 length amidships 5 x 3 8
 Do. for 1/2 at each end 5 x 3 8
REVERSED FRAMES, Angle Iron 3 1/2 x 3 8
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships 27 - 10 24 - 10
 thickness at the ends of vessel 9.8
 depth at 3/4 the half-bdth. as per Rule 16 - 12 -
 height extended at the Bilges 48 - 48 -

BEAMS, Upper, Spar, or Awning Deck 7 x 7 7 x 7
 Single or double Angle Iron, Plate or Tee Bulb Iron
 Single or double Angle Iron on Upper edge 48 - 48 -
 Average space 48 - 48 -
BEAMS, Main or Middle Deck 9 x 9 8 1/2 x 8
 Single or double Angle Iron, Plate or Tee Bulb Iron
 Single or double Angle Iron on Upper Edge 48 - 48 -
 Average space 48 - 48 -
BEAMS, Lower Deck, Hold or Orlop 8 1/2 x 8 8 1/2 x 8
 Single or double Angle Iron, Plate or Tee Bulb Iron
 Single or double Angle Iron on Upper Edge 3 x 3 7 x 3
 Average space 48 - 48 -

KEELSONS Centre line, single or double plate, and 10x, or Intercoastal, Plates (wash) 20 x 15 24 x 13
 Rider Plate 13 x 15 13 x 13
 Bulb Plate to Intercoastal Keelson 6 x 4 9 x 6
 Angle Irons 6 x 4 9 x 6
 Double Angle Iron Side Keelson 6 x 4 9 x 6
 Side Intercoastal Plate (and bulb) 3 1/2 x 3 1/2 8 x 3 1/2
 do. Angle Irons 3 1/2 x 3 1/2 8 x 3 1/2
 Attached to outside plating with angle iron

BILGE Angle Irons 6 x 4 9 x 6
 do. Bulb Iron 8 1/2 x 8 8 1/2 x 8
 do. Intercoastal plates riveted to plating for 3/5 length 3 - 3 - 9

BILGE STRINGER Angle Irons 6 x 4 9 x 6
 Intercoastal plates riveted to plating for 3/5 length as shown in midship section 3 - 3 - 9
SIDE STRINGER Angle Irons 6 x 4 9 x 6

TRANSOMS, material. Knight-heads. Hawse Timbers. Iron frames and plates
Windlass Iron patent **Pall Bitt** attached to fore side

The **FRAMES** extend in one length from Keel to gunwale
 The **REVERSED ANGLE IRONS** on floors and frames extend across middle line to middle deck stringer and to gunwale 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 1/8 in. diameter, averaging 5 3/4 ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 in. diameter, averaging 3 3/4 ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 4 ins. from centre to centre.
Butts of 3 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.
Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 7/8 in. diameter, averaging 3 3/4 ins. from cr. to cr.
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 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. Rivets in lower edge 1" x 1"
Butts of Main Sheerstrake, treble riveted for 1/2 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 1/2 length amidships.
Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 1/2 length amidships.
 Breadth of laps of plating in double riveting 5 1/4 x 6" Breadth of laps of plating in single riveting

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? treble amidships. Double at ends of vessel
 Waterway, how secured to Beams see sketch (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? Three plates fastened to Rivets No. of Breasthooks, and Crutches, to all fore

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Butterfly Beams. angles by Hopkins and Sons
 Manufacturer's name or trade mark, Butterfly Beams. angles by Hopkins and Sons
 The above is a correct description.

Builder's Signature, W. J. Lupton Surveyor's Signature, W. J. Lupton

Flat Keel Plates, breadth and thickness 36 - 12 36 12
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges 36 - 12 36 12
 or doubling at Bilge, or increased thickness, and length applied 11 - 11
 fm up. part of Bilge to lr. edge of Sh'rstrake 11 - 11
 Main Sheerstrake, breadth and thickness 11 - 11
 doubling at Sh'rstrake, & length applied 11 - 11
 from M. to Upr. or Spar Dk. Sh'rstrake. 11 - 11
 Upr. or Spar Dk Sh'rstrake, brdth & thickness 42 14 40 14
 Butt Straps to outside plating, breadth & thickness 19.17 11/16 11/16 11/16
 Lengths of Plating 6 spaces of frames
 Shifts of Plating, and Stringers not less than Two spaces.
 Gunwale Plate on ends of Swing Spar or
 Upper Deck Beams, breadth and thickness... 45 10.9.8 45 9.8
 Angle Iron on ditto 4 x 4 x 9/16 4 x 4 x 9/16
 Tie Plates fore and aft, outside Hatchways 15 - 10.9.8 15 x 10.9.8
 Diagonal Tie Plates on Beams No. of Pairs, none
 Plank Sheer material and scantling Iron putter
 Waterways do. do. Iron putter
 Flat of Upper Deck do. do. Iron putter
 How fastened to Beams Galvanised iron nut and screw bolts
 Stringer Plate on ends of Main or Middle Deck 3 1/4 - 3 1/4 allowed
 Beams, breadth and thickness 66 10.9.8 66 10.9.8
 Is the Stringer Plate attached to the outside plating? yes
 Angle Irons on ditto, No. Two 4 x 4 x 9/16 4 x 4 x 9/16
 Tie Plates, outside Hatchways 15 - 10.9.8 15 x 10.9.8
 Diagonal Tie Plates on Beams, No. of pairs none
 Waterways materials and scantlings Iron putter
 Flat of Middle Deck do. do. Pitch pine
 How fastened to Beams Galvanised iron nut and screw bolts
 Stringer Plates on ends of Lower Deck, Hold or Orlop Beams 40 9.8 40 9.8
 Is the Stringer Plate attached to the outside plating? yes
 Angle Irons on ditto, No. Two 4 x 4 x 9/16 4 x 4 x 9/16
 Stringer or Tie Plates, outside Hatchways 15 x 10.9.8 15 x 10.9.8
 Flat of Lower Deck 2 in. pine
 Ceiling betwixt Decks, thickness and material 6 x 2 Battens
 in hold do. do. 2 1/2 P. Pine 2 1/2
 Main piece of Rudder, diameter at head 8
 do. at heel 4 1/2
 Can the Rudder be unshipped afloat? yes
 Bulkheads No. 5 Thickness of 7.6
 Height up upper deck as shown in sketch 16

How secured to sides of ship Double frames
 Size of Vertical Angle Irons 3 1/2 x 3 1/2 x 8/16 and distance apart 30 ins.
 Are the outside Plates doubled two spaces of Frames in length? yes

Riveted through plates with 7/8 in. Rivets, about 5 1/2 apart.
 Rivets in lower edge 1" x 1"

Butts of Upper or Spar Sheerstrake, treble riveted 1/2 length amidships.
 Butts of Upper or Spar Stringer Plate, treble riveted for 1/2 length amidships.
 Breadth of laps of plating in double riveting 5 1/4 x 6" Breadth of laps of plating in single riveting

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? treble amidships. Double at ends of vessel
 Waterway, how secured to Beams see sketch (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? Three plates fastened to Rivets No. of Breasthooks, and Crutches, to all fore

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Workmanship. Are the butts of plating planed or otherwise fitted? planed.
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? Solid single pieces
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? Very few and in butts only. 17796 Iron

Masts, Bowsprit, Yards, &c., are Iron and 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. yes thoroughly

State also Length and Diameter of Lower Masts and Bowsprit Brig Rigged with Pitch pine pole top, all mast, and the yards of pitch-pine. Lower masts and topmasts in one, of iron two plates in the round. Length deck to hounds 50' 6" fore, main 52' 6" - Topmast 24' in each mast, or full lengths from heel to head of topmasts 100' 10" foremast, and 100' 10" mainmast. Two plates at heel 6' 6" from theer to within 17' of hounds 7' 6" Remainder 9' 6" and 5' 6". Seams simple riveted, double and treble riveted in butts. 3 angle irons in each of 4x3x7/16. Doubling plate at wedges. Butt straps in side mast.

NUMBER for EQUIPMENT 24852		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
SAILS.		136	1 13/16	59 1/8	2700 1/16	59 1/8	4016	1	32-1-0	30-6-1-0	32-0-0	30-2-0-0
CABLES.		136	1 13/16	82 15/20	2700 1/16	82 3/4	Bowers 4011.	1	32-0-3	30-3-0-0	32-0-0	30-2-0-0
Fore Sails,		Lloyd's Cambrian - Proof										
Fore Top Sails,		all dated 31 st Jan ^{ry} 1877. Andrew Jack										
Fore Topmast Stay Sails		all dated 31 st Jan ^{ry} 1877. Andrew Jack										
Main Sails,		all dated 31 st Jan ^{ry} 1877. Andrew Jack										
Main Top Sails,		all dated 31 st Jan ^{ry} 1877. Andrew Jack										
Hawser ...		all dated 31 st Jan ^{ry} 1877. Andrew Jack										
Towlines 207.		all dated 31 st Jan ^{ry} 1877. Andrew Jack										
Warp ...		all dated 31 st Jan ^{ry} 1877. Andrew Jack										
quality good		all dated 31 st Jan ^{ry} 1877. Andrew Jack										

Standing and Running Rigging Wire and Hemp sufficient in size and good in quality. She has 2 Life Long Boat, and 4 others
The Windlass is Iron Patent Steam winches 2 in No 1 and Rudder good Pumps 5 each Compartment, 4 worked by

Engine Room Skylights. How constructed? Leads framed in Iron House How secured in ordinary weather? Nuts and screws
What arrangements for deadlights in bad weather? Wood shutters with thick circular glass in each.

Coal Bunker Openings. How constructed? Circular and How are lids secured? Paint tops to him Height above deck? Flush

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? 5 Scuppers on each side of vessel
and fitted with open side. Guard Rails and Stanchions except close forward -

Cargo Hatchways. How formed? Iron plates 7/16 and 15" above decks.
State size Main Hatch 79' 6" x 11 feet Fore hatch 11' 6" x 9 feet Quarter hatch, 11' 6" x 11 feet and 6 feet x 9 feet.

If of extraordinary size, state how framed and secured? Not of extraordinary size

What arrangement for shifting beams? Iron fore and afters, with Cross Iron coming in main hatch

Hatches, If strong and efficient? Strong and good.

Order for Special Survey No. 640 Date 30/6/76
Order for Ordinary Survey No. 75 Date 75
No. 75 in builder's yard.
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, }
4th. When the ship was complete, and before the }
5th. After the ship was launched and equipped }

General Remarks, The whole time of building and fitting out, under Special Survey.

This vessel is well built and in accordance with the plan and midships-section submitted and approved. Letters bearing dates 26/2/76 and 16/3/76. She is fitted in Engine and Boiler spaces with web-frames 5 in No on each side about 10 feet apart and as required by the Rules. The hold-beam shown in plan between Engines and Boilers is of plate iron 16" deep x 9/16 in thickness with double angle iron on the upper and lower edges 5' x 2' x 9/16 and the Buttery-beam above strengthened by the Bunker bulkhead being carried to the same. and being fully equipped is, in my opinion, eligible for Classification as recommended below.

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, fore-castle or raised quarter deck, or of double or part double bottom. A. 3 decked vessel by the Rules. Houses on deck and a short anchor platform forward.

How are the surfaces preserved from oxidation? Inside Paint and Portland Cement Outside Paint

I am of opinion this Vessel should be Classed 100 A

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, J. F. Light
Special ... £ 78 : 4 : 0 9/24 1877
Certificate ... Good

(Travelling Expenses) (if any) £ none

Committee's Minute Liverpool Feb 9 1877.

Character assigned 100 A. Built under Sp^l Survey Rec^d A & C p^l 1/16 Cent^l 1/16 and Lloyd's C^l Rec^d 1/77

Machinery Certificate attached None