

IRON SHIP.

21380

Rec. 13/8/78

No. 2544 Survey held at Belfast Date, First Survey 9th October 1874 Last Survey 8th August 1878

On the Screw Steamer "British Empire" Yard Number 118 Master J. Lecky

TONNAGE under Tonnage Deck	2148.13
Ditto of Third, Spar, or Awning Deck	
Ditto of Poop, or Raised Or. Dk.	
Ditto of Houses on Deck	
Ditto of Forecastle	
Gross Tonnage	3361.28
Less Crew Space	132.98
Engine Room	1075.61
Register Tonnage as cut on Beam	2152.69

ONE, OR TWO DECKED, THREE DECKED VESSEL.	
SPAR, OR AWNING-DECKED VESSEL.	
HALF BREADTH (moulded)	19.25
DEPTH from upper part of Keel to top of Upper Deck Beams	30.83
GIRTH of Half Midship Frame (as per Rule)	45.75
1st NUMBER	95.83
1st NUMBER, if a THREE-DECKED VESSEL deduct 7 feet	88.83
LENGTH	388.50
2nd NUMBER	34.510
PROPORTIONS—Breadths to Length	10
Depths to Length—Upper Deck to Keel	12.6
Main Deck ditto	16.6

Built at Belfast
 When built 1878 Launched 18th May 1878
 By whom built Harland & Wolff
 Owners British Ship Owners Co. Ltd.
 Port belonging to Liverpool
 Destined Voyage Australia
 Surveyed while Building, Afloat, & in Dry Dock.

PLANS CASE

LENGTH on deck as per Rule	388	Feet. 6	BREADTH—Moulded	38	Feet. 6	DEPTH top of Deck Beams to Upper Deck Beams	28	Feet. 2 1/2	Power of Engines	300	Horse.	Nº. of Decks with flat laid	Three	Nº. of Tiers of Beams	Three
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Dimensions of Ship per Register, length, 392.3 breadth, 39.0 depth, 21.2 and 28.7

	Inches in Ship	Inches per Rule	Inches in Ship	Inches per Rule	Inches in Ship	Inches per Rule
KEEL, depth and thickness	9 1/2 x 3 3/8	9 1/2 x 3 1/2				
STEM, moulding and thickness	9 1/2 x 3 1/2	9 1/2 x 3 1/2				
STERN-POST for Rudder do. do.	11 x 6 1/2	9 1/2 x 7				
for Propeller	4 1/2 x 8					
Distance of Frames from moulding edge to moulding edge, all fore and aft	24"	(Class 100 A.1.)				
FRAMES, Angle Iron, for 3/4 length amidships	5 1/2 x 3 1/2	5 1/2 x 3 1/2	5	5	8	8
Do. for 1/2 at each end	5 1/2 x 3 1/2	5 1/2 x 3 1/2	4	4	7	7
REVERSED FRAMES, Angle Iron	5 1/2 x 3 1/2	5 1/2 x 3 1/2	8	8	8	8
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	2 1/2 x 10	2 1/2 x 10				
thickness at the ends of vessel	9 x 8					
depth at 3/4 the half-bdth. as per Rule	13	12 3/4				
height extended at the Bilges	5 1/2	5 1/2				
BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	8 1/4 x 5 1/2	8 x 8				
Single or double Angle Iron on Upper edge	4 1/2	4 1/2				
Average space						
BEAMS, Main or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	10 x 5 3/4	9 1/2 x 9				
Single, or double Angle Iron, on Upper Edge	4 1/2	4 1/2				
Average space						
BEAMS, Lower Deck, Hold or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	10 x 5 3/4	9 1/2 x 9				
Single or double Angle Iron on Upper Edge	4 1/2	4 1/2				
Average space						
KEELSONS Centre line, single or double plate, box, or intercostal, Plates	30 x 14	29 x 14				
Rider Plate	14 x 14	14 x 14				
Bulb Plate to Intercostal Keelson	5 1/2 x 4 1/2	5 1/2 x 4 1/2	10	10	10	10
Angle Irons	12 x 12	12 x 12				
Double Angle Iron Side Keelson	12 x 12	12 x 12				
Side Intercostal Plate	12 x 12	12 x 12				
do. Angle Irons	5 1/2 x 4 1/2	5 1/2 x 4 1/2	110	110		
Attached to outside plating with angle iron						
BILGE Angle Irons	5 1/2 x 4 1/2	5 1/2 x 4 1/2	10	10		
do. Bulb Iron	12 x 12	12 x 12				
do. Intercostal plates riveted to plating for 1/2 length	12 x 12	12 x 12				
BILGE STRINGER Angle Irons	5 1/2 x 4 1/2	5 1/2 x 4 1/2	10	10		
Intercostal plates riveted to plating for length bulb	8 x 8	8 x 8				
SIDE STRINGER Angle Irons						
Transoms, material. Knight-heads. Hawse Timbers.		Iron				
Windlass	Iron Patent	Pall Bitt		Iron		

	Inches in Ship	16ths in Ship	Inches required	16ths required
Flat Keel Plates, breadth and thickness				
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied	36	13	36	13
fm up. part of Bilge to lr. edge of Sh'rstrake		12 x 13		12 x 13
Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.				
Up. or Spar Dk Sh'rstrake, brdth & thickness	40	14	40	14
Butt Straps to outside plating, breadth & thickness	20 1/2	16 3/4	11 1/4	16 3/4
Lengths of Plating	12 1/2	10 1/2	10 1/2	10 1/2
Shifts of Plating, and Stringers	4 1/2		4 1/2	
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	30	10	30	10
Angle Iron on ditto	5 1/2 x 4 1/2	10	5 1/2 x 4 1/2	10
Tie Plates fore and aft, outside Hatchways				
Diagonal Tie Plates on Beams No. of Pairs, doubled at hatches				
Planksheer material and scantling				
Waterways do. do.				
Flat of Upper Deck do. do.				
How fastened to Beams				
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	30	10	30	10
Is the Stringer Plate attached to the outside plating?	yes			
Angle Irons on ditto, No. 2	4 x 4 x 9		4 x 4 x 9	
Tie Plates, outside Hatchways	4 x 4 x 9		4 x 4 x 9	
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	40	11	40	10
Is the Stringer Plate attached to the outside plating?	yes			
Angle Irons on ditto, No. 2	4 x 4 x 9		4 x 4 x 9	
Stringer or Tie Plates, outside Hatchways				
Flat of Lower Deck				
Ceiling betwixt Decks, thickness and material in hold do. do.				
Main piece of Rudder, diameter at head do. at heel	8 3/4		8 1/2	4 1/2
Can the Rudder be unshipped afloat?	yes			
Bulkheads No. 7 Thickness of			4 x 6	4 x 6
Height up to upper & main d'cks				
How secured to sides of ship	between double frames			
Size of Vertical Angle Irons	5 1/2 x 3 1/2 x 9 1/2			
and distance apart	30 ins.			
Are the outside Plates doubled two spaces of Frames in length?	yes			

The FRAMES extend in one length from keel to gunwale and to Rail alternately Riveted through plates with 16/16 in. Rivets, about 7 apart.
 The REVERSED ANGLE IRONS on floors and frames extend from middle line to upper deck and to Main deck 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 3/16 in. diameter, averaging 5 ins. from centre to centre.
 Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 16/16 in. diameter, averaging 3 1/2 ins. from centre to centre.
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 16/16 in. diameter averaging 3 1/2 ins. from centre to centre.
 Butts of all Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/6 & 2/16 thicker than the plates they connect.
 Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 16/16 in. diameter, averaging 3 1/2 ins. from cr. to cr.
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 16/16 in. diameter, averaging 3 1/2 ins. from cr. to cr.
 Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted. Double on lower edge
 Butts of Main Sheerstrake, treble riveted for 3/5 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 3/5 length amidships.
 Butts of Main Stringer Plate, treble riveted for 2/3 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 2/3 length.
 Breadth of laps of plating in double riveting 6/2 Breadth of laps of plating in single riveting 3/2

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Quadruple, treble & double
 Waterway, how secured to Beams Butter (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? tees turned and riveted No. of Breasthooks, 4 Crutches, 4
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Good
 Manufacturer's name or trade mark, Beams Butterley; Frames Mossend, Plate Forth & Co. Ltd.

The above is a correct description.
 Builder's Signature, Harland & Wolff Surveyor's Signature, J. M. Scullard

IRON 674-0199

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Lloyd's Register

Workmanship. Are the butts of plating planed or otherwise fitted? Hammered
 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 21380. Iron.
 Do any rivets break into or through the seams or butts of the plating? no

Masts, Bowsprit, Yards, &c., are of Iron 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 Four iron masts fitted as auxiliary to Steam Power
Length from upper deck to hounds. Fore 59.6, main 61.9, mizen 60.6, jigger 54.9
masts built in accordance with bracing submitted and approved and
which is attached hereto, see Secretary's letter of the 5th Decr 1877.

NUMBER for EQUIPMENT	Fathoms.	Inches.	Test per Certificate.	Lgh. & Size req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.		No.	Weight. Ex. Stock.	Test per Certificate.	Wght req'd per Rule.	Test req'd per Rule.
						No.	Weight.					
SAILS.												
Fore Sails,	151	2 1/2	76 10/20	300-216	76 5/10	Bowers	1	41.3.9	34 tons	36.12.2-0	40	35 15/20
Fore Top Sails,	151	2 1/2					1	41.0.21		36.12.2-0	40	
Fore Topmast Stay Sails							1	35.0.16		32.9.2-0	34	31 1/20
Main Sails,	90	1 3/4	16 15/20	90-1 3/4	16 15/20	Stream	1	15.0.16	14.12.3.0	15.0.0		
Main Top Sails,	120	4 1/2	Steel	90-1 3/4	16 15/20	Kedges	1	7.1.21	8.13.3.0	7.2.0		
Warp quality <u>good</u>	90	7		90.8	1876-7			4.0.4	5.12.1.1	3.3.0		

Standing and Running Rigging pure hemp sufficient in size and good in quality. She has 3 Long Boats and three others
 The Windlass is Iron Patent good Capstan good and Rudder good Pumps good

Engine Room Skylights.—How constructed? Leak strongly glazed & wired How secured in ordinary weather? Locking
 What arrangements for deadlights in bad weather? None

Coal Bunker Openings.—How constructed? Stops fitted in side of casing to Eng. & boiler deck How are lids secured? Locking Height above deck? 1" 4"
 Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? 9 freeing ports on each side in addition to scuppers.

Cargo Hatchways.—How formed? Iron plates and angles
 State size Main Hatch 19.10 x 12.0; Forehatch 15.6 x 12.0 Quarterhatch 11.6 x 9.10; 11.6 x 9.10

If of extraordinary size, state how framed and secured? None
 What arrangement for shifting beams? Strong oak shifting beams and oak fore & afters
 Hatches, If strong and efficient? yes.

Order for Special Survey No.	Date	Order for Ordinary Survey No.	Date	No. in builder's yard.	DATES of Surveys held while building as per Section 18.
75	6 Sept 1877			118	1st. On the several parts of the frame, when in place, and before the plating was wrought <u>Oct 9-15-17, 20-22-25-27-29-31 Nov 5-10-12-14-17-22-23-27-31</u>
					2nd. On the plating during the process of riveting <u>Sept 3, 11-15-17-19-28-31-1877 - Jan 2-5-8-10-16-24. Feb 1</u>
					3rd. When the beams were in and fastened, and before the decks were laid... <u>5-8-11-18 - March 5-8-11-15-21-28. April 4-10-29 May 10-18-31</u>
					4th. When the ship was complete, and before the plating was finally coated or cemented... <u>June 7-13-20-26 July 4-15-17-25-29-30 August 2-5-6-7-8 1878</u>
					5th. After the ship was launched and equipped

General Remarks, (State quality of workmanship &c.) This three decked ship has been built in accordance with the bracing of midship section submitted and approved, and in other respects with the Secretary's letter's of the 3rd May, 24th May, 11th Sept, 29th Oct & 8th Nov, and with the Rules for the 100 A Grade.

She has a fore-castle 78.6 long top in form of turtle back with angle beams 5 x 3 x 3/8 ^{partially} plated and partially covered with a 2 1/2 inch lead deck. Deck house on quarter deck 22ft long x 21ft wide. Enclosed space at middle line for cabins and enclosure for engine and boiler hatches, sides & ends of iron, coaming plate 5/16, side plating 4/16 with angle beams 5 x 3 x 3/8 extending to sides of ship and riveted to frames carried up to receive them. This erection is 136ft long and 25 feet wide and is covered by a 2 1/2 inch lead deck, upon which is another erection 39.8 long by 12 feet wide composed of pine framing. The life & other boats are stowed on this deck.

She is steered by machinery the chain working over an angle iron wheel, the steering wheel & gear are protected by a house 35.6 long x 13.9 wide. The space below the lower deck before the collision bulkhead is appropriated as a fresh water tank, another being built abaft this bulkhead and of length equal to four frame spaces.

The materials of which this vessel is built are very good, and the workmanship is of a superior character and finish.

State if one, two or three decked vessel, or if open or awning decked, and length of poop, fore-castle or raised quarter deck, or of double or part double bottom.

How are the surfaces preserved from oxidation? Inside Cement under ceiling paint Outside Paint

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

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me,
 Special ... £ 109 : 0 : 0 9th August 1878
 Certificate ... gratis

(Travelling Expenses) (if any) £ —
 Committee's Minute 16th August, 1878.

Character assigned 100 A.1
3 decks

Secretary's letter of 3 May 1877.

This vessel appears eligible to be classed as recommended 2000
 384
 2 in deck
 Lloyd's Register