

IRON SHIP.

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 } <u>2148.13</u>	ONE, OR TWO DECKED, THREE DECKED VESSEL.	Built at <u>Belfast</u>
SPAR, OR AWNING-DECKED VESSEL.	HALF BREADTH (moulded)... .. <u>19.25</u>	When built <u>1875</u> Launched <u>18th May 1878.</u>
DEPTH from upper part of Keel to top of Upper Deck Beams <u>30.83</u>	GIRTH of Half Midship Frame (as per Rule) <u>45.75</u>	By whom built <u>Harland & Wolff</u>
1st NUMBER <u>95.83</u>	1st NUMBER, if a THREE-DECKED VESSEL <u>88.83</u>	Owners <u>British Ship Owners Co.</u>
deduct 7 feet <u>388.50</u>	2nd NUMBER <u>34.510</u>	Port belonging to <u>Liverpool</u>
LENGTH <u>392.3</u>	PROPORTIONS—Breadths to Length <u>10</u>	Destined Voyage <u>Australia</u>
2nd NUMBER <u>34.510</u>	Depths to Length—Upper Deck to Keel <u>12.6</u>	Surveyed while Building, Afloat, & in Dry Dock.
3rd NUMBER <u>16.6</u>	Main Deck ditto <u>16.6</u>	
Gross Tonnage <u>3361.28</u>		
Less Crew Space <u>132.98</u>		
Engine Room <u>1075.61</u>		
Register Tonnage as cut on Beam <u>2152.69</u>		

LENGTH on deck as per Rule... 388 **BREADTH—** Moulded... 38 **DEPTH** top of Deck Beams... 28 **Power of Engines**... 300 **Nº. of Decks with flat laid** Three **Nº. of Tiers of Beams** Three

Dimensions of Ship per Register, length, 392.3 breadth, 39.0 depth, 21.2 and 28.7

	Inches in Ship.	Inches in Ship.	16ths in Ship.	Inches per Rule.	Inches per Rule.	16ths per Rule.		Inches in Ship.	Inches in Ship.	16ths in Ship.	Inches per Rule.	Inches per Rule.	16ths per Rule.
KEEL , depth and thickness... ..	<u>9 1/2</u>	<u>3 1/2</u>	<u>8</u>	<u>9 1/2</u>	<u>3 1/2</u>	<u>8</u>	FLAT KEEL PLATES , breadth and thickness... ..	<u>36</u>	<u>13</u>	<u>36</u>	<u>13</u>	<u>36</u>	<u>13</u>
STEM , moulding and thickness... ..	<u>9 1/2</u>	<u>3 1/2</u>	<u>8</u>	<u>9 1/2</u>	<u>3 1/2</u>	<u>8</u>	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied... ..	<u>12</u>	<u>13</u>	<u>12</u>	<u>13</u>	<u>12</u>	<u>13</u>
STERN-POST for Rudder do. do.	<u>11</u>	<u>6 1/2</u>	<u>8</u>	<u>11</u>	<u>6 1/2</u>	<u>8</u>	of doubling at Bilge, or increased thickness, and length applied... ..	<u>12</u>	<u>13</u>	<u>12</u>	<u>13</u>	<u>12</u>	<u>13</u>
for Propeller... ..	<u>9 1/2</u>	<u>3 1/2</u>	<u>8</u>	<u>9 1/2</u>	<u>3 1/2</u>	<u>8</u>	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 Up. or Spar Dk. Sh'rstrake.	<u>12</u>	<u>13</u>	<u>12</u>	<u>13</u>	<u>12</u>	<u>13</u>
Distance of Frames from moulding edge to moulding edge, all fore and aft... ..	<u>24</u>			<u>24</u>			Up. or Spar Dk Sh'rstrake, brdth & thickness	<u>40</u>	<u>14</u>	<u>40</u>	<u>14</u>	<u>40</u>	<u>14</u>
FRAMES , Angle Iron, for 1/2 length amidships Do. for 1/2 at each end... ..	<u>5 1/2</u>	<u>3 1/2</u>	<u>8</u>	<u>5 1/2</u>	<u>3 1/2</u>	<u>8</u>	Butt Straps to outside plating, breadth & thickness	<u>20</u>	<u>11</u>	<u>20</u>	<u>11</u>	<u>20</u>	<u>11</u>
REVERSED FRAMES , Angle Iron... ..	<u>5 1/2</u>	<u>3 1/2</u>	<u>8</u>	<u>5 1/2</u>	<u>3 1/2</u>	<u>8</u>	Lengths of Plating... ..	<u>12</u>	<u>13</u>	<u>12</u>	<u>13</u>	<u>12</u>	<u>13</u>
FLOORS , depth and thickness of Floor Plate at mid line for half length amidships thickness at the ends of vessel... ..	<u>25 1/2</u>	<u>10</u>	<u>8</u>	<u>25 1/2</u>	<u>10</u>	<u>8</u>	Shifts of Plating, and Stringers... ..	<u>4 1/2</u>		<u>4 1/2</u>		<u>4 1/2</u>	
depth at 1/2 the half-bdth. as per Rule... ..	<u>13</u>			<u>13</u>			Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness... ..	<u>30</u>	<u>10</u>	<u>30</u>	<u>10</u>	<u>30</u>	<u>10</u>
height extended at the Bilges... ..	<u>5 1/2</u>			<u>5 1/2</u>			Angle Iron on ditto... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>
BEAMS , Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron... ..	<u>8 1/4</u>	<u>5 1/2</u>	<u>8</u>	<u>8 1/4</u>	<u>5 1/2</u>	<u>8</u>	Tie Plates fore and aft, outside Hatchways	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>
Single or double Angle Iron on Upper edge... ..	<u>4 1/2</u>			<u>4 1/2</u>			Diagonal Tie Plates on Beams No. of Pairs, doubled at hatchways	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>
Average space... ..	<u>4 1/2</u>			<u>4 1/2</u>			Planksheer material and scantling... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>
BEAMS , Main or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron... ..	<u>10</u>	<u>5 3/4</u>	<u>9</u>	<u>10</u>	<u>5 3/4</u>	<u>9</u>	Waterways do. do.	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>
Single, or double Angle Iron, on Upper Edge... ..	<u>4 1/2</u>			<u>4 1/2</u>			Flat of Upper Deck do. do.	<u>3</u>	<u>10</u>	<u>3</u>	<u>10</u>	<u>3</u>	<u>10</u>
Average space... ..	<u>4 1/2</u>			<u>4 1/2</u>			How fastened to Beams... ..	<u>30</u>	<u>10</u>	<u>30</u>	<u>10</u>	<u>30</u>	<u>10</u>
BEAMS , Lower Deck, Hold or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron... ..	<u>10</u>	<u>5 3/4</u>	<u>9</u>	<u>10</u>	<u>5 3/4</u>	<u>9</u>	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness... ..	<u>30</u>	<u>10</u>	<u>30</u>	<u>10</u>	<u>30</u>	<u>10</u>
Single or double Angle Iron on Upper Edge... ..	<u>4 1/2</u>			<u>4 1/2</u>			Is the Stringer Plate attached to the outside plating? <u>yes</u>						
Average space... ..	<u>4 1/2</u>			<u>4 1/2</u>			Angle Irons on ditto, No. <u>2</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates... ..	<u>30</u>	<u>14</u>	<u>29</u>	<u>30</u>	<u>14</u>	<u>29</u>	Tie Plates, outside Hatchways <u>Iron deck</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
Rider Plate... ..	<u>14</u>	<u>14</u>	<u>14</u>	<u>14</u>	<u>14</u>	<u>14</u>	Diagonal Tie Plates on Beams, No. of pairs... ..	<u>6</u>	<u>16</u>	<u>6</u>	<u>16</u>	<u>6</u>	<u>16</u>
Ball Plate to Intercoastal Keelson... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	Waterways materials and scantlings... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>5 1/2</u>	<u>4 1/2</u>
Angle Irons... ..	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	Flat of Middle Deck do. do.	<u>3</u>	<u>10</u>	<u>3</u>	<u>10</u>	<u>3</u>	<u>10</u>
Double Angle Iron Side Keelson... ..	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	How fastened to Beams... ..	<u>40</u>	<u>11</u>	<u>40</u>	<u>11</u>	<u>40</u>	<u>11</u>
Side Intercoastal Plate... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams... ..	<u>40</u>	<u>11</u>	<u>40</u>	<u>11</u>	<u>40</u>	<u>11</u>
do. Angle Irons... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	Is the Stringer Plate attached to the outside plating? <u>yes</u>						
Attached to outside plating with angle iron... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	Angle Irons on ditto, No. <u>2</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
BILGE Angle Irons... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	Stringer or Tie Plates, outside Hatchways... ..	<u>3</u>	<u>10</u>	<u>3</u>	<u>10</u>	<u>3</u>	<u>10</u>
do. Ball Iron... ..	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	Flat of Lower Deck... ..	<u>3</u>	<u>10</u>	<u>3</u>	<u>10</u>	<u>3</u>	<u>10</u>
do. Intercoastal plates riveted to plating for 1/2 length... ..	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>12</u>	Ceiling betwixt Decks, thickness and material in hold do. do.	<u>2 1/2</u>		<u>2 1/2</u>		<u>2 1/2</u>	
BILGE STRINGER Angle Irons... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	Main piece of Rudder, diameter at head do. at heel... ..	<u>8 3/4</u>		<u>8 3/4</u>		<u>8 3/4</u>	
Intercoastal plates riveted to plating for length... ..	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	Can the Rudder be unshipped afloat? <u>yes</u>						
SIDE STRINGER Angle Irons... ..	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	<u>5 1/2</u>	<u>4 1/2</u>	<u>10</u>	Bulkheads No. <u>7</u> Thickness of... ..	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
Transoms, material. Knight-heads. Hawse Timbers. <u>Iron</u>							Height up to upper & main decks... ..	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>
Windlass <u>Iron Patent</u> Pall Bitt <u>Iron</u>							How secured to sides of ship between double frames... ..	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>

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 13/16 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 & 1/6 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 3/5 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? Double & treble & double

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

Beams of the various Decks, how secured to the sides? Beams 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 Foxhead & Co. & Co.

The above is a correct description.

Builder's Signature, Harland & Wolff Surveyor's Signature, J. M. Scullard

IRON 474-0199

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. Jan.
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.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	No.	Weight. Ex. Stock.	Test per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
SAILS.											
Fore Sails,	151	2 1/2	76 10/20	300-216	76 5/10		1	41.3.9	34 tons	40	35 15/20
Fore Top Sails,	151	2 1/2				Bowers	1	41.0.21	36.12.2.0	40	35 15/20
Fore Topmast Stay Sails						(State Machine where Tested, Date, and name of Superintendent.)	1	35.0.16	32.9.2.0	34	31 15/20
Main Sails,	90	1 3/4	16 15/20	90-1 3/4	16 15/20	Lloyd's proving house Chester					
Main Top Sails,	120	4 1/2	Steel	90-1 3/4	16 15/20	A. S. JACK Sept 5 & 7 Feb 1878					
Warp	90	5		90-1 3/4	16 15/20						
quality	90	5		90-1 3/4	16 15/20						
and						Stream	1	15.0.16	14.12.3.0	15.0.0	14.12.3.0
good						Kedges	1	7.1.21	8.13.3.0	7.2.0	7.2.0

Standing and Running Rigging pure hemp sufficient in size and good in quality. She has 3 life 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 & secured How are lids secured? Lap joint

What arrangements for deadlights in bad weather? 1"4"

Coal Bunker Openings. How constructed? Stops fitted in side How are lids secured? ✓ 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" Fore hatch 15'6" x 12'0" Quarter hatch 11'6" x 9'10" 11'6" x 9'10"

If of extraordinary size, state how framed and secured? ✓

What arrangement for shifting beams? Strong oak shifting beams and oak fore & afters

Hatches, If strong and efficient? yes.

Order for Special Survey No. <u>75</u>	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	<u>Oct 9-15-17-20-22-25-27-29-31 Nov 5-10-12-14-17-22-23-27-31</u>
Date <u>6 Sept 1877</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>
Order for Ordinary Survey No. <u>✓</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>
Date <u>✓</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>
No. <u>118</u> in builder's yard.		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 beam 5" x 3" x 3/8" partially plated
and partially covered with a 2 1/2 inch leath 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 leath 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 above this bulkhead and in 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 poor, 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.

100 A.1.

100 A.1.

100 A.1.

100 A.1.

100 A.1.