

# IRON SHIP

19581  
No. 11784 Survey held at Sunderland Date, First Survey July 6<sup>th</sup> Last Survey November 2<sup>nd</sup> 1877

On the Steamer "Britannia" Tonnage No. 84 Master J Cook

Tonnage under Tonnage Deck	779.39
Hatchways or Deck	39.18
Ditto of Poop, Raised Or. Dk.	68.93
Ditto of Houses on Deck	65.77
o of Forecastle	19.93
ross Tonnage	973.20
ess Crew Space	30.01
ess Engine Room	311.42
gister Tonnage as cut on Beam	631.77

~~ONE OR TWO DECKED, THREE DECKED VESSEL.~~  
~~SPAR, OR AWNING DECKED VESSEL.~~  
HALF BREADTH (moulded) ... .. 15.16  
DEPTH from upper part of Keel to top of Upper Deck Beams 17.50  
GIRTH of Half Midship Frame (as per Rule) ... .. 29.66  
1st NUMBER ... .. 62 32  
1st NUMBER, if a **THREE-DECKED VESSEL** [deduct 7 ...]  
LENGTH ... .. 210.0  
2nd NUMBER ... .. 13,087  
PROPORTIONS—Breadths to Length ... under 7 5/8  
Depths to Length—Upper Deck to Keel ... under 12  
Main Deck ditto ... ..

Built at Sunderland  
When built 1877 Launched 9<sup>th</sup> Oct.  
By whom built New: Short Brothers  
Owners J. W. Taylor & Co  
Register Buildings Sunderland  
Port belonging to Sunderland  
Destined Voyage Prussia.  
\* Surveyed while Building, Afloat, or in Dry Dock

LENGTH on deck as per Rule ... 210 — BREADTH Moulded ... 30 4 DEPTH top of Floors to Upper Deck Beams ... 15 11 Power of Engines ... 98 Horse. No. of Decks with flat laid One No. of Tiers of Beams ...

Dimensions of Ship per Register, length 212.—breadth, 30.6 depth, 15.9

	Inches in Ship.			Inches per Rule.		
	In Ship.	In Ship.	16ths In Ship.	Inches per Rule.	Inches per Rule.	16ths per Rule.
KEEL, depth and thickness	8	2 3/8	8	2 3/8	8	2 3/8
STEM, moulding and thickness	7	2 3/8	7	2 3/8	7	2 3/8
STERN-POST for Rudder do. do.	7	4 3/4	7	4 3/4	7	4 3/4
for Propeller	7	4 3/4	7	4 3/4	7	4 3/4
Distance of Frames from moulding edge to moulding edge, all fore and aft	22 in					
FRAMES, Angle Iron, for 1/2 length amidships	4	3	7	4	3	7
Do. for 1/2 at each end	4	3	6	4	3	6
REVERSED FRAMES, Angle Iron	3	3	6	3	3	6
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	18	8	18	8	18	8
thickness at the ends of vessel	7	7	7	7	7	7
depth at 3/4 the half-bdth. as per Rule	9	9	9	9	9	9
height extended at the Bilges	2 1/2 in					
BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	5 1/2	3	7	5 1/2	3	7
Single or double Angle Iron on Upper edge	3	3	6	3	3	6
Average space	on every frame					
BEAMS, Main, or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	—	—	—	—	—	—
Single, or double Angle Iron, on Upper Edge	—	—	—	—	—	—
Average space	—					
BEAMS, Lower Deck, Hold, or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	8 1/2	8	8 1/2	8	8 1/2	8
Single or double Angle Iron on Upper Edge	4	3	7	4	3	7
Average space	on every 8 ft & 10 ft frame as per midships					
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	13	10	13	10	13	10
Rider Plate	9 3/4	10	9 3/4	10	9 3/4	10
Bulb Plate to Intercoastal Keelson	—	—	—	—	—	—
Angle Irons	4 1/2	3 1/2	7	4 1/2	3 1/2	7
Double Angle Iron Side Keelson	—	—	—	—	—	—
Side Intercoastal Plate	—	—	—	—	—	—
do. Angle Irons	—	—	—	—	—	—
Attached to outside plating with angle iron	—	—	—	—	—	—
BILGE Angle Irons	4 1/2	3 1/2	7	4 1/2	3 1/2	7
do. Bulb Iron	—	—	—	—	—	—
do. Intercoastal plates riveted to plating for length	7 1/2	7	7 1/2	7	7 1/2	7
BILGE STRINGER Angle Irons	4 1/2	3 1/2	7	4 1/2	3 1/2	7
Intercoastal plates riveted to plating for length	—	—	—	—	—	—
SIDE STRINGER Angle Irons	—	—	—	—	—	—

	Inches. In Ship.	16ths. In Ship.	Inches. per Rule.	16ths. per Rule.
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 1 Strake	52	9	32	9
fm up. part of Bilge to lr. edge of Sh'rstrake	—	8	—	8
Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake.	—	9	—	9
Up. or Spar Dk. Sh'rstrake brdth & thickness	—	8	—	8
Butt Straps to outside plating, breadth & thickness	10 1/2	7 1/4	9 3/4	7 1/4
Lengths of Plating	6 spaces of frames			
Shifts of Plating, and Stringers	2 spaces of frames			
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	30	9	30	9
Angle Iron on ditto	4 1/2	3 1/2	7	4 1/2
Tie Plates fore and aft, outside Hatchways	Iron deck			
Diagonal Tie Plates on Beams No. of Pairs,	Nil			
Planksheer material and scantling	Iron deck			
Waterways do. do.	—			
Flat of Upper Deck do. do.	6/16 x 7/16 Iron deck			
How fastened to Beams	Riveted			
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	—	—	—	—
Is the Stringer Plate attached to the outside plating?	—	—	—	—
Angle Irons on ditto, No.	—	—	—	—
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	28	8	28	8
Is the Stringer Plate attached to the outside plating?	Yes			
Angle Irons on ditto, No.	3	3 1/2	7	3 1/2
Stringer or Tie Plates, outside Hatchways	4 1/2	3 1/2	7	4 1/2
Flat of Lower Deck	—	—	—	—
Ceiling betwixt Decks, thickness and material in hold do. do.	2 1/2	3	2 1/2	3
Main piece of Rudder, diameter at head do. at heel	5	5	5	5
Can the Rudder be unshipped afloat?	Yes			
Bulkheads No. 4 Thickness of 6/16	—	—	—	—
Height up main deck & Aft one to hold beams	—	—	—	—
How secured to sides of ship	Between double frames			
Size of Vertical Angle Irons 3 x 3 x 6/16 and distance apart 30 ins.	—	—	—	—
Are the outside Plates doubled two spaces of Frames in length?	Yes			

ransoms, material. Right heads. Hawse Timbers. Iron  
Windlass Harfield's patent Nil Secured to Lap Carlings  
The FRAMES extend in one length from Keel to gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.  
The REVERSED ANGLE IRONS on floors and frames extend near middle line to hold beam 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 in. diameter, averaging 5 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 1/2 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 2 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 & single riveted; with rivets 3/4 in. diameter, averaging 3 1/2 ins. from cr. to cr.  
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/2 ins. from cr. to cr.  
Edges of Main Sheerstrake, double & single riveted. Upper Sheerstrake, double or single riveted.  
Butts of Main Sheerstrake, treble riveted for 1/2 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted — length amidships.  
Butts of Main Stringer Plate, treble riveted for 1/2 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 3/4  
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double & treble throughout  
Waterway, how secured to Beams Iron deck (Explain by Sketch, if necessary.)  
Beams of the various Decks, how secured to the sides? Bracket knees and rivets to frames & stringer plates No. of Breasthooks, 4 Crutches, 39 thirteen  
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? All angles pt. Jynack & Co.  
Manufacturer's name or trade mark, Plates, pt. Jynack & Co. and pt. Bolton & Co. and pt. Darlington I. Co.  
The above is a correct description.  
Builder's Signature, Short Surveyor's Signature, James Gibson  
Surveyor to Lloyd's Register of British and Foreign Shipping.

IRON 474-0419

**Workmanship.** Are the butts of plating planed or otherwise fitted? *Butts, and edges of outer strakes are 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? *Yes*  
 Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *Yes very well*  
 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? *A few*

Masts, Bowsprit, Yards, &c., are *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

1958 Jun

N <sup>o</sup> .	SAILS.	CABLES, &c.	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.	W'ght req'd per Rule.	Test req'd per Rule.	
	Fore Sails,	Chain	240	1 7/16	3 3/8	240-1 7/16	3 3/8	Bowers	1	18.3.21	19.7.2.0	18.0.0	19.0.0.0
	Fore Top Sails,	Breaking Strain							1	18.0.7	19.2.0.21	18.0.0	19.0.0.0
	Fore Topmast Stay Sails	dated							1	14.2.21	16.5.2.14	15.1.0	16.7.0.0
	Main Sails,	Chain	60	7/8	-	90 4 15/16	-	Stream	with 5 1/2"	8.2.14	9.9.1.14	8.0.0	Tested at the R.N.C.P.S. by J. Hatfield
	Main Top Sails,	Storm Cbl				90 "		do	4.0.0	5.14.1.14	4.0.0	R.N.C.P.S. by J. Hatfield	
	and	Hawser	85	9	-	90 "		Kedges	do	2.0.18	4.4.1.14	2.0.0	J. Hatfield
		Towlines	80	6 1/2	-	90 "							
		Warp	80	5 1/2	-	90 "							
		quality	80	4 1/2	-	90 "							
			80	4	-	90 "							

Standing and Running Rigging *S.S. Navy Rope* sufficient in size and *good* in quality. She has 1 Life Boat and 2 others  
 The Windlass is *Harfield's patent*; 1 Capstan *3* Winches and Rudder *good* Pumps *4* hand, *good*.  
**Engine Room Skylights.**—How constructed? *Wood sk on iron* How secured in ordinary weather? *Thumb Screws*  
 What arrangements for deadlights in bad weather? *Solid shutters fitted with Bulls Eyes*  
**Coal Bunker Openings.**—How constructed? *Iron Coamings* How are lids secured? *Hatch bars* Height above deck? *12" & 2 1/4"*  
**Scuppers, &c.**—What arrangements for clearing upper deck of water, in case of shipping a sea? *Scuppers and Ports in the Iron Bulwarks*  
**Cargo Hatchways.**—How formed? *Iron plates Price's patent Self-trimming*  
 State size Main Hatch *30 1/4 x 13 feet* Forehatch *16 3/4 x 13 ft* Quarterhatch *38 1/4 ft x 13 feet*  
 If of extraordinary size, state how framed and secured *permanent and shifting Beams one of the latter*  
 What arrangement for shifting beams? *in every space exceeding 12 ft in length also*  
**Hatches, If strong and efficient?** *efficient, Solid 2 1/2 thick two wood fore and aft Coamings in a*

Order for Special Survey No. *2419*  
 Date *28 June 1877*  
 Order for Ordinary Survey No. *1*  
 Date *1877*  
 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 *Built under S.P. and Surveyed 1877 July 6 9 25 27 30 August 29 13 14 21 24 28 30 Sep. 1 4 7 11 14 17 19 20 21 22 25 28 Oct. 2 5 9 15 17 22 26 29 30 31 Nov. 2.*  
 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. When the ship was launched and equipped

**General Remarks** (State quality of workmanship, &c.) *This vessel is constructed with a raised Quarter deck about 7 1/4 feet in length; a Bridge House enclosing the engine and Boiler spaces about 40 feet in length, and a Top-gallant fore-castle about 24 feet in length; The Sheerstrake and topsides at front of the break have been additionally strengthened in accordance with the Scantlings on the tracing of Midship Section; The workmanship is of good quality and the conditions contained in Secretary's letter of the 7<sup>th</sup> July 1877. are fulfilled.*

*The water Ballast Tank in the Fore Hold is 53 feet long that in the After Hold is 55 feet long each Tank has been pressed with a head of Water up to the Upper Deck and proved quite Satisfactory.*

*Similar Ship to "Armstrong" Rep 11540. "Ferndale" Rep 11660. "Vectis" - 11744. "Alliance" - 11757.*

*These Drawings accompany this Report.* See above.  
 State if one, two, or three, decked vessel, or if open, or coming decked; and the lengths of ~~prop~~ fore-castle, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside *Cement to Bilges paint ab* Outside *Paint &c*  
 I am of opinion this Vessel should be Classed *90 A. 1.*

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, *HK*  
 Special ... £ 47 : 3 : 0 *2nd Nov. 1877*  
 Certificate ...  
 (Travelling Expenses, if any, £ ... )  
 Committee's Minute *13th November, 1877.*  
 Character assigned *90 A. 1*  
*Lloyd's M 611.77 10R 21 13*  
*How old or*  
*Joseph Keen.*  
 This vessel appears eligible to be classed as recommended viz 90A  
 1877  
 26th Nov  
 1877  
 date 11/11/1877  
 Lloyd's Register of Shipping  
 Foundry