

IRON SHIP

No. 11784 Survey held at Sunderland Date, First Survey July 6th Last Survey November 2nd 1897
 On the Steamer "Britannia" Tonnage 779.39 Master J Cook

TONNAGE under Tonnage Deck } 779.39
 of Hold } 39.18
 of Deck } 68.93
 Ditto of Poop } 65.77
 Raised Qr. Dk. } 19.93
 Ditto of Houses } 973.20
 on Deck } 30.01
 Gross Tonnage } 311.42
 Less Crew Space } 631.77
 Net Tonnage } 631.77
 as cut on Beam }

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 feet] 210.0
LENGTH 13.087
2nd NUMBER under 7 1/2
PROPORTIONS—Breadths to Length under 12
 Depths to Length—Upper Deck to Keel Main Deck ditto

Built at Sunderland
 When built 1877 Launched 9th Oct.
 By whom built New: Short Brothers
 Owners J. W. Taylor & Son
 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 Feet. Inches. —
BREADTH Moulded ... 30 Feet. Inches. 4
DEPTH top of Floors to Upper Deck Beams ... 15 Feet. Inches. 11
 Power of Engines ... 98 Horse.
 No. of Decks with flat laid One
 No. of Tiers of Beams Two

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

	Inches in Ship.			Inches per Rule.		
KEEL , depth and thickness	8	X	2 3/8	8	X	2 3/8
STEM , moulding and thickness... ..	7	X	2 3/8	7	X	2 3/8
STERN-POST for Rudder do. do.	7	X	4 3/4	7	X	4 3/4
for Propeller						
Distance of Frames from moulding edge to } moulding edge, all fore and aft }	22 in			22 in		
				(Class 90 A)		
	Inches In Ship.	Inches In Ship.	16ths. In Ship.	Inches per Rule	Inches per Rule	16ths per Rule
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
thickness at the ends of vessel	-	-	7	-	-	7
depth at 3/4 the half-bdth. as per Rule	-	9	-	-	9	-
height extended at the Bilges... ..	a fair taper					
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 ...	-	8	8	-	8	8
Average space... ..	3	3	6	3	3	6
	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
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
" Rider Plate	-	9 3/4	10	-	9 3/4	10
" Bulb Plate to Intercoastal Keelson	4 1/2	3 1/2	7	4 1/2	3 1/2	7
" Angle Irons	wash plates 6/16					
" 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... ..	-	7 1/2	7	-	7 1/2	7
" do. Intercoastal plates riveted to plating for length	-	-	-	-	-	-
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	-	-	-	-	-	-

	In Ship.	In Ship.	per Rule	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 } fm up. part of Bilge to lr. edge of Sh'rstrake }	32	9	32	9
Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	—	8	—	8
Up. or Spar Dk Sh'rstrake, brdth & thickness	36	11	36	11
Butt Straps to outside plating, breadth & thickness	2 plates	—	—	13 1/16
Lengths of Plating	—	—	—	—
Shifts of Plating, and Stringers	10 1/2	7 1/4	9 1/4	7 1/4
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness ... }	6 spaces of frames	2 spaces of frames	—	—
Angle Iron on ditto	30	9	30	9
Tie Plates fore and aft, outside Hatchways ...	4 1/2 x 3 1/2 x 7	4 1/2 x 3 1/2 x 7	—	—
Diagonal Tie Plates on Beams No. of Pairs,	Iron deck	Iron deck	—	—
Planksheer material and scantling	Nil	Nil	—	—
Waterways do. do.	Iron deck	Iron deck	—	—
Flat of Upper Deck do. do.	6/16 x 7/16	6/16 x 7/16	Iron deck	Iron deck
How fastened to Beams	Riveted	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	Yes	—	—
Angle Irons on ditto, No. 3	3 1/2 x 3 1/2 x 7	3 1/2 x 3 1/2 x 7	—	—
Stringer or Tie Plates, outside Hatchways	4 1/2 x 3 1/2 x 7	4 1/2 x 3 1/2 x 7	—	—
Flat of Lower Deck	2 1/2	2 1/2	3	2 1/2
Ceiling betwixt Decks, thickness and material in hold do. do.	2 1/2	2 1/2	3	2 1/2
Main piece of Rudder, diameter at head do. at heel	5	5	5	5
Can the Rudder be unshipped afloat?	Yes	Yes	—	—
Bulkheads No. 4 Thickness of 6/16	—	—	—	—

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
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? All Angles pt. J. & S. & Co. and pt. Darlington I. Co.
 Manufacturer's name or trade mark, Plates, pt. J. & S. & Co. and pt. Darlington I. Co.
 The above is a correct description.
 Builder's Signature, Short Brothers 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

19581 Jun

NUMBER for EQUIPMENT 14,367		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
one complete suit	SAILS.	240 1 7/16		37 1/8	240-1 7/16	37 1/8	Bowers	1	18.3.21	19.7.2.0	18.0.0	19.0.0.0
	Fore Sails,	Chain Tested at R.N.C.P.S. by J. Hatfield		55 5/8		55 5/8		1	18.0.7	19.2.0.21	18.0.0	19.0.0.0
	Fore Top Sails,	Breaking strain dated Sep 2 12 1877						1	14.2.21	16.5.2.14	15.1.0	16.7.0.0
	Fore Topmast Stay Sails	Chain 60 7/8		-	90 4 15/16	-		Tested at R.N.C.P.S. by J. Hatfield Sep 25. Oct 25 1877 rep. actually				
	Main Sails,	Hawser Rope 85-9		-	90-10	-		with S/R	8.2.14	9.9.1.14	8.0.0	Tested at the
	Main Top Sails,	Towlines 80-6 1/2		-	90-9	-		Stream	4.0.0	5.14.1.14	4.0.0	R.N.C.P.S. by
and	quality	80-4 1/2		-	90-5 1/2	-	Kedges	52	2.0.18	4.4.1.14	2.0.0	J. Hatfield

Standing and Running Rigging S.S. Wire Rope sufficient in size and good in quality. She has 1 Life Long Boat and 2 others

The Windlass is Harfield's patent; 1 Capstan 13 Inches and Rudder good Pumps 4 hand, good.

Engine Room Skylights.—How constructed? Wood Sk. Lt. on Iron Coamings fitted on Bridge 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 Fore hatch 16 3/4 x 13 ft Quarter hatch 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

Order for Special Survey No. 2419	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 25 26 29 30 31 Nov 2.
Date 28 June 1877		2nd. On the plating during the process of riveting	
Order for Ordinary Survey No. 84		3rd. When the beams were in and fastened, and before the decks were laid....	
Date		4th. When the ship was complete, and before the plating was finally coated or cemented..	
No. 84 in builder's yard.		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 76 3/4 feet in length; a Bridge House enclosing the engine and Boiler spaces about 40 feet in length, and a Top-gallant-forecastle about 24 feet in length; The Quarterstrake and topsides at front of the break have been additionally strengthened in accordance with the scantlings on the tracing of Midship's Section. The workmanship is of good quality and the conditions contained in Secretary's letter of the 7th 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.

Three Drawings accompany this Report.

State if one, two, or three, decked vessel, or if open, or coming decked; and the lengths of poop, 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 painted 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,

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 br

Joseph Keen.

This vessel appears eligible to be classed as recommended viz 90 A. 1
1877
Lloyd's Register
Foundry
date 11/11/1877