

# Steel IRON SHIP

14733  
10 SEP 88

No. 14733 Survey held at Sunderland Date, First Survey February 9<sup>th</sup> 1888 Last Survey September 6<sup>th</sup> 1888  
 On the Steel S.S. "Beatrice" Yard 89 185

Tonnage under Tonnage Deck	1724.43
Ditto of Third, Spar, or Awning Deck	347.84
Ditto of Deck, or Raised or Dk. Deck	112.33
Ditto of Houses	13.52
Ditto of Forecastle	3.48
as Tonnage	2241.36
as Crew Space	50.70
as Engine Room	2490.55
as Register Tonnage out on Beam	717.24
	1473.42

**ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AWNING DECKED VESSEL.**

Half Breadth (moulded)	19.38
Depth from upper part of Keel to top of Upper Deck Beams	22.25
Girth of Half Midship Frames (as per Rule)	37.85
1st Number	79.48
1st Number, if a 3-Decked Vessel deduct 7 feet	
Length	288.3
2nd Number	22,914
Proportions— Breadths to Length	7.4
Depths to Length— Upper Deck to Keel	12.9
Main Deck ditto	

Master Grate  
 Built at Sunderland  
 When built 1888 Launched 25 July  
 By whom built Batham, Russell & Co  
 Owners 6 Hornum and son  
 Residence 17 Philip Lane  
 Port belonging to London  
 Destined Voyage Naples  
 If Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule	288	Feet. Inches.	4	BREADTH Moulded	38	Feet. Inches.	10	DEPTH top of Floors to Upper Deck Beams	18	Feet. Inches.	9	Power of Engines	250	Horse.	N° of Decks with flat laid	2	N° of Tiers of Beams	70
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Dimensions of Ship per Register, length, 290.0 breadth, 39.05 depth, 18.7 Moulded depth 21.6

	Inches in Ship	Inches per Rule	Inches in Ship	Inches per Rule
KEEL, depth and thickness	10 x 2 3/4	10 x 2 3/4	10 x 2 3/4	10 x 2 3/4
STEM, moulding and thickness	10 x 2 3/4	10 x 2 3/4	10 x 2 3/4	10 x 2 3/4
STERN-POST for Rudder do. do.	10 x 6	10 x 6	10 x 6	10 x 6
" " for Propeller	24	24	24	24
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	24	24
Frames in Tank 3 1/2, 3, 2 1/2				
RAMS, Angle Iron, for 1/2 length amidships	5.3 3 9	5.3 3 9	5.3 3 9	5.3 3 9
Do. for 1/2 at each end	5 3 7	5 3 7	5 3 7	5 3 7
REVERSED FRAMES, Angle Iron	3 1/2 3 8	3 1/2 3 8	3 1/2 3 8	3 1/2 3 8
BOARDS, depth and thickness of Floor Plate at mid line for half length amidships	4 2 6	4 2 6	4 2 6	4 2 6
thickness at the ends of vessel	6	6	6	6
depth at 1/2 the half-bdth. as per Rule	Cellular & Bottom			
height extended at the Bilges				
RAMS, Upper, Spar, or Awning Deck	6 1/2 3 9	6 1/2 3 9	6 1/2 3 9	6 1/2 3 9
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron				
Angle or double Angle Iron on Upper edge				
Average space	24	24	24	24
RAMS, Main, or Middle Deck				
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron				
Angle, or double Angle Iron, on Upper Edge				
Average space				
RAMS, Lower Deck	10 1/2 10	10 1/2 10	10 1/2 10	10 1/2 10
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron	9 1/2 9	9 1/2 9	9 1/2 9	9 1/2 9
Angle or double Angle Iron on Upper Edge	4 1/2 4	4 1/2 4	4 1/2 4	4 1/2 4
Average space	3 1/2 3 1/2	3 1/2 3 1/2	3 1/2 3 1/2	3 1/2 3 1/2
RAMS, Hold, or Orlop				
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron				
Angle or double Angle Iron on Upper Edge				
Average space				
KEELSONS Centre line, single or double plate, box, or Intercostal, Plates	42 10	42 10	42 10	42 10
Rider Plate				
Bulb Plate to Intercostal Keelson				
Angle Irons	Cellular & Bottom			
Double Angle Iron Side Keelson				
Side Intercostal Plate				
do. Angle Irons				
Attached to outside plating with angle iron				
ANGLE IRONS				
do. Bulb Iron				
do. Intercostal plates riveted to plating for length				
BILGE STRINGER Angle Irons	6 4 9	6 4 9	6 4 9	6 4 9
do. Intercostal plates riveted to plating for both for half length	9	9	9	9
MIDDLE STRINGER Angle Irons	6 4 9	6 4 9	6 4 9	6 4 9
do. Intercostal plates riveted to plating for both for half length	9	9	9	9

	Inches in Ship	Inches per Rule	Inches in Ship	Inches per Rule
Flat Keel Plates, breadth and thickness	36	12	36	12
PLATES in Garboard Strakes, br'dth & thickness				
From Garboard to upper part of Bilges	11	11	11	11
Of d'bling at Bilge, or increased thickness, and length applied				
From up. prt of Bilge to lr. edge of Sh'rstrake				
Main Sheerstrake, breadth and thickness	46	13	40	13
Of d'bling at Sh'stk. & lng. applied	18	11	18	11
From M'n. to Upr. or Spar Dk. Sh'rstrake				
Up. or Spar Dk Sh'rstrake, br'dth & thicken'ss.				
Butt Straps to outside plating, breadth & thickness	19.9 1/2	17.11	19.9 1/2	17.11
Lengths of Plating	seven frames	spaces		
Shifts of Plating, and Stringers	265			
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	41	11	41	11
Angle Iron on ditto	6.4	9	6.4	9
Tie Plates fore and aft, outside Hatchways	Steel Dk			
Diagonal Tie Plates on Beams No. of Pairs				
Flat of Up., Spar, or Awning Dk.	Steel			
How fastened to Beams	Rivets	6.8	6.8	
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				
Flat of Middle Deck* do. do.				
How fastened to Beams				
Stringer Plates on ends of Lower Deck, Holders or Orlop Beams	38	9	38	9
Is the Stringer Plate attached to the outside plating?	yes			
Angle Irons on ditto, No. 4 as profile				
Stringer or Tie Plates, outside Hatchways				
Flat of Lower Deck* for 1/2 aft & R	15	10	15	10
	3 Rivets			
Ceiling betwixt Decks, thickness and material	R 2" battens & Space			
" in hold do. do.	2 1/2 Solid to Bilge			
Main piece of Rudder, diameter at head	7 3/4	7 3/4		
do. at heel	3 3/4	3 3/4		
Can the Rudder be unshipped afloat?	yes			
Bulkheads No. 6 No. per Rule 6				
Thickness of	7.6			
Height up to main Dk				
How secured to sides of ship	double frames			
Size of Vertical Angle Irons	6.3 1/2			
and distance apart	48 ins.			
Are the outside Plates doubled two spaces of Frames in length?	yes			

FRAMES extend in one length from margin plate of Tank to Gunwale Riveted through plates with 7/8 in. Rivets, about 7 apart.

The REVERSED ANGLE IRONS on floors and frames extend from middle line to L of M & L - and R 2 Dk and to 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 1/2 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 1/2 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3 1/8 ins. from centre to centre.

Butts of all Strakes at Bilge for 1/2 length, treble riveted with Butt Straps lapped 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 3/8 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3 1/8 ins. from cr. to cr.

Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.

Butts of Main Sheerstrake, treble riveted for all 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 5 1/4 Breadth of laps of plating in single riveting nil

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double & treble No. of Breasthooks, Six Crutches, 3

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Plate, Cowell & Co

Manufacturer's name or trade mark, Forgings & Ray Sid. (Erection Iron Storage Wash. Co) Angels butts Hornum & Co

The above is a correct description.

Builder's Signature, Batham, Russell & Co Surveyor's Signature, J. Neen.

Surveyor to Lloyd's Register of British and Foreign Shipping.

State clearly where plating is of alternate thickness—as distinguished from dissimilar thickness at ends of vessel.

\* If Iron Deck, state if whole or part, and if wood deck.

S.L.D. 58-0324

Form No. 1 for Iron

**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? *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*  
 Do any rivets break into or through the seams or butts of the plating? *in a few cases at the butts only*

Masts, Bowsprit, Yards, &c., are *Iron & wood* in *good* condition, and sufficient in size and length. If of Iron or Steel give Scantlings  
 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 Material  
 and if stamped with Maker's name.  
 State also Length and Diameter of Lower Masts and Bowsprit *please see sketch*

*Selected plates have been selected and tested by test  
 and cold tests and proved satisfactory. Makers Stratton, Mack*

NUMBER & LETTER for EQUIPMENT		25589.S.		Test per Certificate.	Inches per Rule.	Machine where Tested and Superintendent, also Number of Certificate.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate	Weight req'd per Rule.	Machine where Tested and Superintendent, also Number of Certificate.	
SAILS.		CABLES, &c.		Fathoms.	Inches.								
N <sup>o</sup> .		Chain	6.784.	270	1 9/16	82 1/2 59 1/2 1 13/16	30 May 1888	Bower					
		Fore Sails,		tested at RTRCPT by J. Hartness				Anchors	17309	32.0.0	30.2.2.0	32.0.0	24 May 1888
		Fore Top Sails,		Iron Steam Chain	75	4 1/4	35 1/2 75.4 1/4		17239	31.0.21	29.11.1.0	32.0.0	5 "
		Fore Topmast Stay Sails,		or Steel Wire	90	4	33 " 90.4		17306	28.1.14	27.8.0.14	27.1.0	24 "
		Main Sails,		or Hempen Chain	90	3 1/4	22 " 90.3 1/4			31.2.7	Total 31.1.0		
		Main Top Sails, and		Cable	90	2 1/2	12 " 90.2 1/2						
				Towline, Hemp	90	2	7 "						
				or Steel Wire									
				Hawser									
				Warp									
				quality									

Standing and Running Rigging *Iron and Rope* sufficient in size and *good* in quality. She has *1* Life Long Boat and *three* others

The Windlass is *Napiers patent*. 1 Capstan *4* Winches and Rudder *good* Pumps *5* hand and *Steam*

Engine Room Skylights.—How constructed? *Iron 5 ft x 4 ft* How secured in ordinary weather? *hand screws*

What arrangements for deadlights in bad weather? *Bulls eyes fitted in Iron Shutters*

Coal Bunker Openings.—How constructed? *Iron Coaming* How are lids secured? *bars* Height above deck? *39 1/8 in*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Scuppers and Ports fitted in the Bulwarks*

Cargo Hatchways.—How formed? *Iron plates fitted in the usual manner*

State size Main Hatch *24 ft x 12 ft 2 in* Forehatch *14 ft x 12 ft* Quarterhatch *18 ft x 12 ft and 14 ft x 12 ft*

If of extraordinary size, state how framed and secured? *Shifting Beams and Webs as per Rule and efficient*

What arrangement for shifting beams? *fore and afters deck also increased in way of large Hatch*

Hatches, If strong and efficient? *solid and efficient*

Order for Special Survey No. *3481*  
 Date *22 Decr 87*  
 Order for Ordinary Survey No. *3482*  
 Date *1888*  
 No. *135* in builder's yard.

1st.	2nd.	3rd.	4th.	5th.
On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the process of riveting	When the beams were in and fastened, and before the decks were laid,...	When the ship was complete, and before the plating was finally coated or cemented..	After the ship was launched and equipped
<i>Built under S.P. and surveyed, 1889 Feb 9, 12, 19, 21, 23, 25, 26, 27, 30, May 23</i>	<i>14, 19, 20, 21, 22, 23, 24, 25, April 2, 4, 6, 9, 10, 11, 12, 13, 16, 17, 19, 21, 22, 25, 26, 27, 30, May 23</i>	<i>29, 10, 11, 14, 15, 16, 19, 22, 24, 25, 26, 28, 29, 31, June 1, 4, 5, 7, 8, 11, 14, 19, 23, 24, 28</i>	<i>24, 27, 29, 10, 12, 13, 14, 16, 17, 18, 19, 20, 23, 24, 30, August 3, 4, 9, 10, 13, 14, 15, 16, 19, 20</i>	<i>25, 28, 29, 31, Sept 1, 6</i>

State dates of letters respecting this case *P. Jan 4. M 12, 16 and 25. Mar 2/88*

General Remarks (State quality of workmanship, &c.) *Good*

*This vessel has now been built under Special Survey in accordance with the Rules and the accompanying approved Drawings. The Circular on steel has been carried out. She has a Raised 2<sup>d</sup> D<sup>ck</sup> 98 ft long, Bridges 138 ft long, and Top Gallant 7.0. 33 feet, an iron hood aft 15 ft x 11 feet. Fitted with Cellular double bottom 220 ft containing 402 tons, after peak tank 21 tons. Part of the Bridge D<sup>ck</sup> is sheathed with 3 in wood on iron plates 70 ft long.*

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

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, *J. Keen*  
 Special .....£ *49:15:6* 6 Sept 1888

(to be sent as per margin). Certificate ...  
 (Travelling Expenses, if any, £ ...)  
 Committee's Minute *TUES 11 SEPT 1888*

Character assigned *100A1 Steel*

Surveyor to Lloyd's Register of British and Foreign Shipping  
 It is submitted that the vessel appears eligible to be classed 100A.1 "Steel" as recommended 1st (Steel) or 2<sup>nd</sup> (Beams all in Steel) (particulars appended)

Reference should be made to any correspondence connected with the case.  
 Certificate to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

