

IRON SHIP.

23181

Survey held at *Newcastle* Date, First Survey *20th June 1878* Last Survey *14th April 1879*In the *Iron Screw Steamer "Celtic Monarch"*Master *R.S. Hawn**Nov 18/78*

TONNAGE under Tonnage Deck	1853.69	ONE, OR TWO DECKED, THREE DECKED VESSEL.
Do. of Third Spar, or Lower Deck		SPAR, OR AWNING-DECKED VESSEL.
Do. of Poop, or Keel & St. Bt.	57.95	HALF BREADTH (moulded) 17.37
Do. of Houses	59.09	DEPTH from upper part of Keel to top of Upper Deck Beam 26.50
Do. of Forecastle	30.22	GIRTH of Half Midship Frame (as per Rule) 34.00
Gross Tonnage	2013.69	1st NUMBER 52.87
Less Crew Space	61.54	1st NUMBER, if a THREE-DECKED VESSEL 7.00
Less Engine Room	644.38	LENGTH 288.42
Register Tonnage as out on Beam	1307.77	2nd NUMBER 21882
		PROPORTIONS—Breadths to Length 8.2
		Depths to Length—Upper Deck to Keel 10.88
		Main Deck ditto 14.9

Built at *Newcastle*When built *1878-79* Launched *21st Feb/79*By whom built *Messrs W. Richardson & Co.*Owners *J. Patton Junr & Co.*Port belonging to *London*Destined Voyage *India via London*

Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule ...	288	5	BREADTH Moulded ...	34	9	DEPTH top of Floors to Upper Deck Beams Do. do. Main Deck Beams ...	24	6 1/2	17	3 1/2	Power of Engines ...	200	Horse.	N ^o . of Decks with flat laid	Two	N ^o . of Tiers of Beams	Three
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Dimensions of Ship per Register, length, *290.6* breadth, *35* depth, *24.5*

	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	STEM, moulding and thickness ...	10 x 2 3/4	10 x 2 3/4
STERN-POST for Rudder do. do.	10 x 5 1/2	10 x 5 1/2	" " for Propeller ...	24	24
Distance of Frames from moulding edge to moulding edge, all fore and aft ...	24	(Class 100A)			
FRAMES, Angle Iron, for 2/3 length amidships ...	5	3	Do. for 1/3 at each end ...	5	3
EVERSED FRAMES, Angle Iron ...	3	3		3	3
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships ...	23 1/2	9	" thickness at the ends of vessel ...	11 3/4	47
" depth at 3/4 the half-bdth. as per Rule ...	11 3/4	47	" height extended at the Bilges ...	7	3
BEAMS, Upper, Spar, or Awning Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	7	3	Single or double Angle Iron on Upper edge	3	3
Average space ...	48	48			
BEAMS, Main, or Middle Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	6	3	Single or double Angle Iron, on Upper Edge	6	3
Average space ...	24	24			
BEAMS, Lower Deck, Hold, or Orlop Single or double Ang. Iron, Plate or Tee Bulb Iron	8 1/2	7	Single or double Angle Iron on Upper Edge	3	3
Average space ...	20 per app. plans	20 per app. plans			
KEELSONS Centre line, single or double plate, box, or Intercoastal Plates ...	19	13	" Rider Plate ...	13	13
" Bulb Plate to Intercoastal Keelson ...	6	4	" Angle Irons ...	6	4
" Double Angle Iron Side Keelson ...	6	4	" Side Intercoastal Plate ...	6	4
" do. Angle Irons ...	6	4	" Attached to outside plating with angle iron	3	3
BILGE Angle Irons ...	6	4	" do. Bulb Iron ...	9	8
" do. Intercoastal plates riveted to plating for length ...	6	4			
BILGE STRINGER Angle Irons ...	6	4	" Intercoastal plates riveted to plating for half length ...	8	8
SIDE STRINGER Angle Irons ...					

Transoms, material. Knight-heads. Hawse Timbers. *Iron*Windlass *Emerson & Walker's Pall Bitt Patent.*The FRAMES extend in one length from *Keel* 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 *above Main Deck Stringer* and to *Upper Deck* alternatelyKEELSONS. 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 1/2* 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 *4* ins. from centre to centre.
- " Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 3/4* ins. from centre to centre.
- " Butts of *Three* Strakes at Bilge for *half* length, treble riveted with Butt Straps *7/8* 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 *4* ins. from cr. to cr.
- " Butts from Bilge to *Main Sheerstrake*, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 3/4* 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 *length* amidships. Butts of Upper or Spar Sheerstrake, treble riveted *1/2* length amidships.
- " Butts of *Main Stringer Plate*, treble riveted for *1/2* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *half* length.
- " Breadth of laps of plating in double riveting *5 1/2* Breadth of laps of plating in single riveting *5*

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *treble and double riveted.*Waterway, how secured to Beams *Iron Gutter* (Explain by Sketch, if necessary.)Beams of the various Decks, how secured to the sides? *Welded knees riveted to frames* No. of Breasthooks, *seven* Crutches, *four*What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Angles and Bulbs from*Manufacturer's name or trade mark, *Dorman Long & Co., Plates: Fox Head & Co. and Hartlepool malleable*

The above is a correct description.

Builder's Signature, *William Richardson & Co.* Surveyor's Signature, *M. Moverly.* *J. H. Cooke.*

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

IRON 434-0001

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? *A few.*

23181 Iron

Masts, Bowsprit, Yards, &c., are *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 *Iron masts:—main mast length extreme 76 feet. Fore mast 86 feet. Diameter at the partners 24" head 15" heel 22". Two plates in the round of 1/6 to 5/16 in thickness. Edges double riveted and the butts treble and double riveted. Doubled at the partners doubling plates left long. makers of The Iron Consett Iron Compy.*

NUMBER for EQUIPMENT 26291		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	No.	Weight. Ex. Stock.	Test per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
SAILS.		CABLES, &c.					Bowers	1	32.0.0	30.2.2.0	32.0.0	30.2.0
Fore Sails,		Chain						1	32.0.0	30.2.2.0	32.0.0	30.2.0
Fore Top Sails,		L.P.H. Lipton. Erasmus H. Smith. Supt. 28+30.1.79						1	27.1.7	26.13.0.14	27.1.0	26.10.20
Fore Topmast Stay Sails		75 1/2 ft. 1 1/2		15 1/2	75-1 1/2			1	10.1.0	12.4.1.14	13.0.0	
Main Sails,		Hawser ...						1	5.1.11	7.14.0.7	6.2.0	
Main Top Sails,		Towlines ...					Stream	1	1.1.21			
and Rigging Wire		Warp ...					Kedges	1	2.1.21	5.0.0.0	3.1.0	
Standing and Running Rigging		quality Good										

Manilla sufficient in size and *good* in quality. She has *2 Life Long* Boats and *2 Others*

The Windlass is *Good* Capstan *Good* and Rudder *Good* Pumps *Good*

Engine Room Skylights.—How constructed? *Iron casing 7 ft above the deck* How secured in ordinary weather? *Bolted down.*

What arrangements for deadlights in bad weather? *Solid shutters and bulls eyes.*

Coal Bunker Openings.—How constructed? *Hatch upon Bridge* How are lids secured? *By hatch bars* Height above deck? *1/4" above Bridge*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Seven ports each side besides mooring pipes.*

Cargo Hatchways.—How formed? *Iron Comings and headledges riveted together to the beams.*

State size Main Hatch *24 ft. x 12 ft.* Fore hatch *14 ft. x 10 ft.* Quarter hatch *22 ft. x 12 ft.*

If of extraordinary size, state how framed and secured? *Ordinary Size*

What arrangement for shifting beams? *Deep web plate in the two large hatchways and three wood foreafters in each hatchway*

Hatches, If strong and efficient? *Yes.*

Order for Special Survey No. <i>279</i>	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	<i>1878 June 20. 21. July 2. 8. 17. 23. 26. 29. Aug 7. 9.</i>
Date <i>17 July 1878</i>		2nd. On the plating during the process of riveting	<i>18. 20. 21. 22. 30. Sep 5. 11. 19. 24. Oct 1. 3. 9. 10. 20.</i>
Order for Ordinary Survey No.		3rd. When the beams were in and fastened, and before the decks were laid...	<i>29. 31. Nov 5. 11. 12. 18. Dec 4. 31. 1879 Jan 1.</i>
Date		4th. When the ship was complete, and before the plating was finally coated or cemented...	<i>7. 10. 14. 17. 22. 27. 29. Feb 4. 7. 10. 13. 17. 20.</i>
No. <i>114</i> in builder's yard.		5th. After the ship was launched and equipped	<i>22. 24. 27. March 3. 6. 14. 18. 21. 26. 28. 31. April 4. 7. 11. 14.</i>

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

This is a three decked vessel built in accordance with the approved tracings hereto attached, and otherwise in accordance with the Rules. She has a Poop 32 feet long, Bridge house amidships 26 feet long with a passage through each side, and Foregallant fore-castle 34 ft long. She is fitted with a water ballast tank in the after hold 84 feet long, a deep tank to the height of the hold beams fitted before the engine and boiler space 22 feet long, and a peak tank forward to the height of the hold beams, 17 feet long. The tanks tested with a head of water to the height of the load line and found satisfactory. The general quality of the workmanship is good.

State if one, two, or three decked vessel, or if spar, or awning 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 and Paint* Outside *Paint & Gannett's Composition*

I am of opinion this Vessel should be Classed *100 A1 Two decks and three tiers of beams.*

The amount of the Entry Fee ... £ 5 : : : is received by me, *T. Spring*

Special *paid* £ 72 : 16 : : 17 April 1879

Certificate ... : : :
(Travelling Expenses, if any, £ : : :)

Committee's Minute *8 April* 1879

Character assigned

Lloyd's Mss *100 A1* *2 Dks* *DBW 3 in Beams dbb 602 84 ft*

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



This vessel appears to be eligible to be classed recommended by Lloyd's Register of British and Foreign Shipping.