

IRON SHIPS.

Rec 5/1/72

No. 6085 - Survey held at Greenock Date, First Survey 12th April Last Survey 30th Dec^r 1871
On the Iron Screw Steamer "Mirfield" Master Boaden

Tonnage under Tonnage Deck } <u>808.50</u>	ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>Greenock</u>
Ditto of Third Span } <u>191.22</u>	Half moulded breadth <u>15</u>	Half Moulded Breadth	When built <u>1871</u> Launched <u>30th Nov 1871</u>
Ditto of Poop, or of Fore-castle } <u>22.83</u>	Depth from upper part of Keel to top of Upper Deck Beams <u>19.41</u>	Total Depth if three or more Decks	By whom built <u>Scott & Co.</u>
Ditto of Houses on Deck	Girth of Half Midship Frame (as per Rule) <u>30</u>	Total Girth of Half Midship Frame	Owners <u>J. B. Braithwaite & Co.</u>
Gross Tonnage <u>1023.56</u>	1st Number <u>6441</u>	3rd Number	Port belonging to <u>London</u>
Crew Space, as per Rule } <u>41.97</u>	Length <u>218.7</u>	Length	Destined Voyage <u>India to Bombay</u>
Register Tonnage, as on Beam <u>981.59</u>	2nd Number <u>14086.467</u>	4th Number	If Surveyed while Building, Afloat, or in Dry Dock. <u>While building & afloat</u>
Engine Room <u>327.54</u>	Depths to Length. <u>Over 12</u>	Breadths to Length. <u>over 7</u>	
Register Tonnage, as a Steamer, cut on Beam } <u>654.05</u>			

Length on deck as per Rule, 218 Feet. 1 Inches. Moulded Breadth, 30 Feet. 4 1/2 Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule 17 Feet. 8 Inches. Horse. 120 Power of Engines, 480 N^o. of Decks with flat laid One N^o. of Tiers of Beams Two

Dimensions of Ship per Register, length, 221.4 breadth, 30.45 depth, 17.0

	Inches in Ship.	Inches required per Rule.		Inches in Ship.	Inches required per Rule.		Inches in Ship.	Inches required per Rule.
1, if bar iron, depth and thickness	8 x 2 1/2	8 x 2 3/8	Flat Keel Plates, breadth and thickness	30	46	30	46	46
2, if centre through plate, depth and thickness	7 1/4 x 2 3/8	7 1/4 x 2 3/8	Plates in Garboard Strakes, breadth and thickness		46		46	46
3, if bar iron, moulding and thickness	7 1/4 x 4 3/4	7 1/4 x 4 3/4	Do. from Garboard to upper part of Bilges					
4, post for Rudder do. do.	7 1/4 x 4 3/4	7 1/4 x 4 3/4	Do. of doubling at Bilge, or increased thickness, and length applied					
5, post for Propeller	23	23	Do. fin up. part of Bilge to l. edge of Sh'rstrake	30	46	30	46	46
6, distance of Frames from moulding edge to moulding edge, all fore and aft	23	23	Do. Main Sheerstrake, breadth and thickness					
7, Frames, size of Angle Iron, for 1/2 length amidships	4 x 3	4 x 3	Do. of d'bling at Sh'rstrake, & length applied					
Do. for 1/4 at each end	4 x 3	4 x 3	Do. from Mn. to Upr. or Sp. Dk. Sh'rstrake					
Reversed Frames, size of Angle Iron	3 x 3	3 x 3	Do. Upr. or Sp. Dk. Sh'rstrake, brdth & thickness	48	46			
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	20	18 1/2	Butt Straps to outside plating, breadth & thickness	12 x 4	11 x 9/8	13 x 9/8	13 x 9/8	13 x 9/8
Do. at the ends	20	18 1/2	Lengths of Plating from 1/2 feet inwards to 18 feet	Two spaces		Two spaces		
Do. do. do. at Bilge Keelson	8	8	Shifts of Plating, and Stringers					
Do. height extended at the Bilges	48 inches	37 inches	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	3 x 3 x 1/2	46			
Beams, Upper, Spar, or Awning Deck (No. single or double Angle Iron, Plate or Tee Bulb Iron)	5 x 3 1/2	5 x 3 1/2	Angle Iron on ditto	8	46			
Single or double Angle Iron on Upper edge	3 x 3	3 x 3	Tie Plates (fore and aft), outside Hatchways					
Average space	46 inches	46 inches	Diagonal Tie Plates on Beams (No. of Pairs,)					
Beams, Main or Middle Deck (No. single or double Angle Iron, Plate or Tee Bulb Iron)	7 1/2	7 1/2	Planksheer material and scantling					
Single or double Angle Iron, on Upper Edge	3 x 2 1/2	3 x 2 1/2	Waterways do. do. Pitch Pine	12 x 4				
Average space	46 inches	46 inches	Flat of Upper Deck do. do. Yellow Pine	5 x 2 1/2				
Beams, Lower Deck, Hold or Orlop (No. single or double Angle Iron, Plate or Tee Bulb Iron)	7 1/2	7 1/2	How fastened to Beams					
Single or double Angle Iron on Upper Edge	3 x 2 1/2	3 x 2 1/2	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	35	46	31	46	46
Average space	46 + 92 inches	46 + 92 inches	(Is the Stringer Plate attached to the outside plating?)	Yes				
Keelson Centre line, single or double plate, box or intercostal, size of Plates	26	23	Angle Irons on ditto (No. on)	5 x 3 1/2 x 5/8	5 x 3 1/2 x 7/8			
Do. Bulb Plate to Intercostal Keelson	7 1/2	7 1/2	Tie Plates, outside Hatchways	10 1/2	46	10	46	46
Do. Size of Angle Irons	5 x 3 1/2	5 x 3 1/2	Diagonal Tie Plates on Beams (No. of pairs,)	10 1/2	46	10	46	46
Do. Side Intercostal Keelson, size of Plates	5 x 3 1/2	5 x 3 1/2	Waterways, materials and scantlings					
Do. Angle Irons on tops of Floors	5 x 3 1/2	5 x 3 1/2	Flat of Middle Deck do. do. Yellow Pine	3 1/2		3 1/2		
Do. Bilge Keelson, Bulb Iron for 1/2 length	7 1/2	7 1/2	How fastened to Beams					
Do. do. Intercostal plates riveted to plating for length	5 x 3 1/2	5 x 3 1/2	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	27	46	23	46	46
Do. do. Angle Irons	5 x 3 1/2	5 x 3 1/2	(Is the Stringer Plate attached to the outside plating?)	Yes				
Side Stringers (No. on pair) size of Angle Irons	5 x 3 1/2	5 x 3 1/2	Angle Irons on ditto (No. 2)	3 1/2 x 3 1/2 x 5/8	3 1/2 x 3 1/2 x 5/8			
Do. Intercostal plates riveted to plating for length	5 x 3 1/2	5 x 3 1/2	Stringer or Tie Plates, outside Hatchways					

Transoms, material Iron or, if none, in what manner compensated for. None
Knight-heads Iron Hawse Timbers Iron
Windlass Common Walker's patent Pall Bitt Iron

The Frames extend in one length from Keel to Sunwale Riveted through plates with (5/8 in.) Rivets, about 5 apart.
The Reverse Angle Irons on the floors and frames extend across the middle line from lower decks to main decks and to alternately keelsons. Are the various lengths of Plates and Angle Irons properly connected? Yes And are their butts properly shifted? Yes

Plates, Garboard, double or single Riveted to Keel, double or single at upper edge, with Rivets (1 1/2 in.) diameter, averaging (1/2 in.) from centre to centre.
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (3/4 in.) from centre to centre.
Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (1/16) thick, double or single Riveted; with Rivets (7/8 in.) diameter averaging (3/4 in.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? No
Do. of Two Strakes at Bilge for half length, treble riveted with Butt Straps 1/2 thicker than their plates.
Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece (1/16) thick, or clencher, double or single riveted; with rivets (7/8 in.) diameter, averaging (3/4 in.) from centre to centre.
Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge single At lower edge Double
Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (9/16) thick, double or single Riveted; with Rivets (7/8 in.) diameter, averaging (3/4 in.) from centre to centre.
Do. Butts of Main Sheerstrake, double or treble Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for 1/2 length amidships. Breadth of laps of plating in double Riveting (5 1/2 + 4 1/2) Breadth of laps of plating in single Riveting (2 1/2 + 2 1/2)

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double
Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)
Beams of the various Decks, how secured to the sides? By plates & beam ends turned down No. of Breasthooks, Five Crutches, Four
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Mashed Iron
Manufacturer's name or trade mark, Coats Iron Co. & Messrs. Iron Co.

We certify that the above is a correct description of the several particulars therein given.
Builder's Signature, Scott & Co. Surveyor's Signature, H. B. Scott

120450-0130

Workmanship. Are the butts of plating planed or otherwise fitted? Planed
 Do the edges of the caryel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? Yes
 Do the fillings between the ribs and plates fill in solid with single pieces? Yes or are they in short lengths of various thicknesses? No
 Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? Yes
 Are there any rivets which either break into or have been put through the seams or butts of the plating? A few

Her Masts, Bowsprit, ^{of Much Pine} Yards, &c., are in Good condition, and sufficient in size and length. If they are of Iron or Steel give the 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 Fore and Main Masts Pitch Pine 70 feet long and 14 inches diameter

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Chainables and Anchors compared with Table 22 for 1870-1871

N ^o .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, N ^o .		Weight. Ex. Stock.	Test as per Certificate.	Wight req'd per Rule.	Test req'd per Rule.
								No.	Weight.				
		Number for equipment <u>15494</u>											
	Fore Sails,	3607.0 29/11/1871 Chain	270	1 7/8	37.4.0.0	148	34-ton	12.8.28/11/71	5735	18.0.21	19.4.1.14	16.3.0	18-ton
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent.) Lloyd's Dipton Proving House						12.8.28/11/71	5139	18.0.7	19.2.0.21	16.3.0	15-ton
	Fore Topmast Stay Sails	Hampton Stream Chain Cable	60	3/4	6.13.0.0			12.8.28/11/71	5137	15.2.0	16.18.3.0	14.0.27	15-ton
	Main Sails,	Hawser	90	7				(State Machine where Tested, and name of Superintendent.) Lloyd's Dipton Proving House					
	Main Top Sails,	Towlines	90	7				(State Machine where Tested, and name of Superintendent.) Lloyd's Dipton Proving House					
		Warp						(State Machine where Tested, and name of Superintendent.) Lloyd's Dipton Proving House					
		All of <u>Good</u> quality.						Keftomas Gorge Chain & Anchor Works, Depton					
								Stream	29/11/71	8150	3.0.2	9.5.0.0	7.0.0
								Kedges	29/11/71	8173	4.0.2	5.12.3.0	3.2.0
													1.3.0

Her Standing and Running Rigging Good sufficient in size and Good in quality. She has Two Life Long Boat and Two other boats.
 The present state of the Windlass is Good Capstan Good and Rudder Good Pumps Good

Engine Room Skylights.—How constructed? of Iron and Wood How secured in ordinary weather? Tarparings
 What arrangements are there for deadlights in such for bad weather? Made Watertight

Coal Bunker Openings.—How constructed? Cast Iron runs Slids How are lids secured? Cross bars How high above deck? Flush

Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board?
Ports in Bulwarks

Cargo Hatchways.—How formed? of Iron and Wood State size 19 feet by 9 feet
 If of extraordinary size, state how framed and secured? Centre beams and secured by screw bolts and shunts

What arrangement for shifting beams? Screw bolts and shunts
Hatches, themselves, whether strong and efficient? Yes **Main Hatchways.**—State size 19 feet by 9 feet

Order for Special Survey No. 564 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought. Specially Survejed
 Date 30th March 1871 Surveys held 2nd. On the plating during the progress of riveting. while built and from
 Order for Ordinary Survey No. _____ while building 3rd. When the beams were in and fastened, and before the decks were laid April to Dec 1871
 Date _____ as per 4th. When the ship was complete, and before the plating was finally coated or cemented in all 30 visits.
 No. 147 in builder's yard. Section 18. 5th. After the ship was launched and equipped

General Remarks, This vessel has been built under Special Survey, as per Order No. 564: is long rigged, and has a full Poop and Forecastle, with a partial awning deck extending forward for about half the length of the vessel, the same having Ports and Scuppers fitted to relieve the decks of water. Is fitted with a watertight compartment amidships with an Iron top in line with hold beams; and also a tank for water ballast in after hold, the same being connected to the outside plating with angle irons and made watertight with 7/8" side and 3/16" top with five substantial fore and aft stringers formed of plates and angle irons on upper and lower edges and connected with and resting on the floors. She is a sister ship to the "Crusader" Report N 6060.

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, fore-castle or raised quarter deck, or of double or part double bottom.
 In what manner are the surfaces preserved from oxidation? Inside Portland Cement and above three coats of Red Lead Outside three coats of Red Lead and bottom coated with patent composition, and black paint on top-sides

I am of opinion this Vessel should be Classed 100 A1
 The amount of the Entry Fee£ 5 : 11 : 11 is received by me,
 Special£ 49 : 2 : 11
 X Certificate " : " : "
 (Travelling Expenses) (if any) £ _____

Committee's Minute 5th January 1871
 Character assigned 100 A1
Concur in the opinion that this vessel should be classed 100 A1.
 Rules Lloyd's Regis. Foundation