

IRON SHIP

13678
New 7/12/74

No. 12670 Survey held at Newcastle Date, First Survey 15th June/74 Last Survey 17th Nov^r. 1874

On the S.S. "Grident"

Master Reid

TONNAGE under Tonnage Deck } 1769.07
 Ditto of Third, Spar, or Awning Deck }
 Ditto of Deep, or Raised Or. Dk. }
 Ditto of Houses on Deck } 57.53
 Ditto of Forecastle }
 Gross Tonnage 1826.60
 Less Crew Space 76.32
 Less Engine Room 584.57
 Register Tonnage as cut on Beam } 1165.77

ONE, OR TWO DECKED, THREE DECKED VESSEL.
 SPAR, OR AWNING DECKED VESSEL.
HALF BREADTH (moulded)... .. 16.40
DEPTH from upper part of Keel to top of Upper Deck Beams 26.45
GIRTH of Half Midship Frame (as per Rule) .. 39.00
1st NUMBER 81.85
1st NUMBER of a THREE-DECKED VESSEL 7.00
 [deduct 7 feet] 74.85
LENGTH 281.75
2nd NUMBER 21088
PROPORTIONS—Breathths to Length 8.5
 Depths to Length—Upper Deck to Keel 10.6
 Main Deck ditto 14.4

Built at Newcastle
 When built 1874 Launched 26th Sep/74
 By whom built Palmers Shipbuilding & Iron Co^o Limited.
 Owners Hall Bros, Quay-side, Newcastle
 Port belonging to London
 Destined Voyage Aden
 Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule ... 281 9 Feet. Inches. **BREADTH** Moulded... 32 10 Feet. Inches. **DEPTH** top of Floors to Upper Deck Beams ... 24 6 Feet. Inches. Do. do. Main Deck Beams... 17 6
 Power of Engines ... 150 Horse. N^o. of Decks with flat laid 400 N^o. of Tiers of Beams 300

Dimensions of Ship per Register, length, 282.0 breadth, 33.3 depth, 24.2

	Inches in Ship.	Inches per Rule.
KEEL , depth and thickness	9 1/2 x 2 1/2	9 1/2 x 2 1/2
STEM , moulding and thickness	9 x 2 1/2	9 x 2 1/2
STERN-POST for Rudder do. do. for Propeller	9 x 5	9 x 5
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24 (Class 100A)
FRAMES , Angle Iron, for 2/3 length amidships Do. for 1/3 at each end	4 1/2 3 8/16	4 1/2 3 8/16
REVERSED FRAMES , Angle Iron	4 1/2 3 7/16	4 1/2 3 7/16
FLOORS , depth and thickness of Floor Plate at mid line for half length amidships thickness at the ends of vessel depth at 3/4 the half-bdth. as per Rule height extended at the Bilges	2 3/2 9/16 8/16 7/16 10/16 under Bulkheads	2 3/2 9/16 8/16 7/16 10/16
BEAMS , Upper, Spar, or Awning Deck Single or double Ang. Iron, Plate or Tee Bulb Iron Single or double Angle Iron on Upper edge Average space	6 1/2 6/16 2 1/2 2 1/2 5/16 48	6 1/2 6/16 2 1/2 2 1/2 5/16 48
BEAMS , Main, or Middle Deck Single or double Ang. Iron, Plate or Tee Bulb Iron Single, or double Angle Iron, on Upper Edge Average space	5 1/2 3 1/2 8/16 24	5 1/2 3 1/2 8/16 24
BEAMS , Lower Deck, Hold, or Orlop Single or double Ang. Iron, Plate or Tee Bulb Iron Single or double Angle Iron on Upper Edge Average space	8 8/16 3 3 6/16 14 16 16 ft 44 6 16 ft	8 8/16 3 3 6/16 44 6 16 ft
KEELSONS Centre line, single or double plate, box, or intercostal, Plates Rider Plate Bulb Plate to Intercostal Keelson Angle Irons Double Angle Iron Side Keelson Side Intercostal Plate do. Angle Irons Attached to outside plating with angle iron	32 8/16 5 1/2 4 9/16 5 1/2 4 9/16 Double Bottom	32 8/16 5 1/2 4 9/16 5 1/2 4 9/16
BILGE Angle Irons do. Bulb Iron do. Intercostal plates riveted to plating for the length of double bottom	22 7/16 5 1/2 4 9/16 5 1/2 4 9/16 8/16	22 7/16 5 1/2 4 9/16 5 1/2 4 9/16
BILGE STRINGER Angle Irons Intercostal plates riveted to plating for 3/5 the length.	8/16 8/16	8/16 8/16
SIDE STRINGER Angle Irons		
Transoms, material. Knight-heads. Hawse Timbers.		Iron
Windlass Patent Iron Pall Bitt		

	Inches. In Ship.	16ths. In Ship.	Inches. required	16ths. required
Flat Keel Plates, breadth and thickness	36	12/16	36	12/16
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied	10/16 and 11/16	9/16 and 10/16	10/16 and 11/16	9/16 and 10/16
fm up. part of Bilge to l. edge of Sh'rstrake	11/16	10/16	11/16	10/16
Main Sheerstrake, breadth and thickness of doubling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake. Up. or Spar Dk Sh'rstrake, brdth & thickns	40 40	12/16 12/16	40 40	15/16 15/16
Butt Straps to outside plating, breadth & thickness	17 to 10 1/4	from 13/16 to 9/16		
Lengths of Plating	10 feet		10 feet	
Shifts of Plating, and Stringers	4		4	
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	54	8/16	54	8/16
Angle Iron on ditto	4.4	9/16	4.4	9/16
Tie Plates fore and aft, outside Hatchways	15 1/2	8/16	15 1/2	8/16
Diagonal Tie Plates on Beams No. of Pairs, Planksheer material and scantling Waterways do. do.	none			Iron Gutter Waterway
Flat of Upper Deck do. do. How fastened to Beams	4" S.P.		4"	nut and screw bolts
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	46 1/2	10/16	46 1/2	10/16
Is the Stringer Plate attached to the outside plating?	Yes		Yes	
Angle Irons on ditto, No. 2	4.4	9/16	4.4	9/16
Tie Plates, outside Hatchways	Built stronger than at Middle line from			
Diagonal Tie Plates on Beams, No. of pairs	none			Iron Deck
Waterways materials and scantlings				
Flat of Middle Deck do. do. How fastened to Beams	6/16	Iron	6/16	Iron
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	3 3/2	9/16	3 3/2	9/16
Is the Stringer Plate attached to the outside plating?	Yes		Yes	
Angle Irons on ditto, No. 2	4.4	9/16	4.4	9/16
Stringer or Tie Plates, outside Hatchways				
Flat of Lower Deck				
Ceiling betwixt Decks, thickness and material in hold do. do.	Sparring 2 1/2		2 1/2	
Main piece of Rudder, diameter at head do. at heel	6 1/2 3 1/2		6 1/2 3 1/2	
Can the Rudder be unshipped afloat?	Yes		Yes	
Bulkheads No. 5 Thickness of Height up	6/16 6/16		6/16 6/16	
How secured to sides of ship	to main deck. fore 13" to upper deck			
Size of Vertical Angle Irons and distance apart	3.3. 7/16 and 30 ins.			
Are the outside Plates doubled two spaces of Frames in length?	Yes		Yes	

The **FRAMES** extend in length from Gunwale to Gunwale Riveted through plates with 7/8 3/4 in. Rivets, about 6 apart.
 The **REVERSED ANGLE IRONS** on floors and frames extend across middle line to above main deck 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 1/8 in. diameter, averaging 5 ins. from centre to centre.
 Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 3/4 in. diameter, averaging 3 1/2 3/4 ins. from centre to centre.
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 3/4 in. diameter averaging 3 1/2 3/4 ins. from centre to centre.
 Butts of Three Strakes at Bilge for half length, treble riveted with Butt Straps 7/16 thicker than the plates they connect.
 Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 7/8 3/4 in. diameter, averaging 3 1/2 3/4 ins. from cr. to cr.
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 3/4 in. diameter, averaging 3 1/2 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 1/2 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 1/2 length.
 Breadth of laps of plating in double riveting 6 times Breadth of laps of plating in single riveting 3 1/2 Dia^r
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble and Double
 Waterway, how secured to Beams Iron Gutter (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? Irons riveted to frames No. of Breasthooks, 5 Crutches, 4
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Plates and Angles by
 Manufacturer's name or trade mark, Palmers Shipbuilding & Iron Co^o Limited.

The above is a correct description.
 Builder's Signature, J. M. Moverly
 Surveyor's Signature, J. M. Moverly
 Surveyor to Lloyd's Register of British and Foreign Shipping.

180N659-0355

Workmanship. Are the butts of plating planed or otherwise fitted? planed 13678 Jan
 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 in butts

Masts, Bowsprit, Yards, &c., are all 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 Ypre Mast Length 82 feet, Dia 25 in
Main do do 73 1/2 do 25 in
Mizen do do 54 do 19 in

Schooner Tripped.
 Formed with two plates in the round 7/16 and 6/16 thick double riveted edges, double, and triple riveted butts.

No.	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.		No.	Weight. Ex. Stock.	Test per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
								Bowers	Stream					
	Fore Sails,	Chain	270	1 3/4	55 1/8	270. 1 3/4	55 2/10	3	32.0.5	30.3.1.20	30.0.0	28 1/2		
	Fore Top Sails,	Breakin' Strain			77 1/8				30.1.17	28.19.0.7				
	Fore Topmast Stay Sails	Lloyd's Spec P.H. R. Marshall Sup ^e			21 1/2 and 26 th Sep 1874.				24.2.14	24.8.1.20	25.2.0	25 1/2		
	Main Sails,	Chain	90	1 1/6	90. 1 1/6			1	12.0.9		12.0.0			
	Main Top Sails,	Hamp Strm Cbl	90	10/2	90. 11			2	6.0.0		6.0.0			
		Hawser ...	90	8	90.7				2.3.26		3.0.0			
		Towlines ...												
		Warp ...												
		quality <u>Good</u>	90	6 1/2										

Standing and Running Rigging Wire & Hemp sufficient in size and Good in quality. She has two Loys Boats and three others

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

Engine Room Skylights.—How constructed? Iron Coaming. Leak Skylights over. How secured in ordinary weather? bolted down

Coal Bunker Openings.—How constructed? Iron Coamings How are lids secured? Iron bars Height above deck? 15"

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

Cargo Hatchways.—How formed? Iron Coamings

State size Main Hatch 17-6 x 9-6 Forehatch 10-0 x 7-0 Quarterhatch 13-0 x 9-6

If of extraordinary size, state how framed and secured? Yes

What arrangement for shifting beams? Shifting Beam in Hatches

Hatches, If strong and efficient? Yes

Order for Special Survey No. 10118 DATES of Surveys held while building as per Section 18.

Date 16 Jan 1874 1st. On the several parts of the frame, when in place, and before the plating was wrought Built under Special Survey

Order for Ordinary Survey No. — 2nd. On the plating during the process of riveting 1874 June 15. 18. 22. 30. July 1. 2. 6. 10. 14. 16.

Date — 3rd. When the beams were in and fastened, and before the decks were laid... 17. 24. 27. 30. Aug 3. 14. 18. 20. 26. 28. Sep 1. 2. 4.

No. 1011 in builder's yard. 4th. When the ship was complete, and before the plating was finally coated or cemented... 10. 14. 18. 22. 25. 29. Oct 1. 6. 14. 16. 19. 20. 22.

5th. After the ship was launched and equipped 20. Nov 10. 12. 17.

General Remarks (State quality of workmanship, &c.) She is fitted with a double bottom in fore and after Holds, also in Engine room (two frame spaces excepted) of the united lengths of 184 feet, side plate 7/16" top plating 6/16" thick. Satisfactory compensation is given for the break of the double bottom in the Engine room.

Monkey Forecastle 32 feet long, and Bridge Deck about 40 ft long fitted amidships.

She is well built, and worthy of the class recommended.

The Tracing of Midship Section approved by the Committee is attached.

State if one, two, or three, decked vessel, or if spar, or awning decked; and the lengths of poop, forecastle, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside Cement & paint Outside Red lead & paint

I am of opinion this Vessel should be Classed 100 A.1. Three Decks, part Double Bottom.

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

Special ... £ 60 : 15 : : 5 Dec. 1874

Certificate ...

(Travelling Expenses, if any, £ —).

Committee's Minute 8th December 1874

Character assigned 100 A.1

4. Palmer's Registering or other Certificate. Register, please call on the

[Handwritten signatures and stamps, including Lloyd's Register logo and date 1/12/74]