

IRON SHIP.

No. 12133 Survey held at Newcastle Date, First Survey 27th January Last Survey 20th May 1873.

On the S.S. PETER GRAHAM Yard Number 293 Master R. A. Gallies

TONNAGE under Tonnage Deck 730.38 ONE, OR TWO DECKED, THREE DECKED VESSEL.
 Ditto of Third, Spar, or Awning Deck. 48.76 SPAR, OR AWNING-DECKED VESSEL.
 Ditto of Poop, or Raised Qr. Dk. 10.49 HALF BREADTH (moulded) 13.9 Feet.
 Ditto of Houses on Deck 33.40 DEPTH from upper part of Keel to top of Upper Deck Beams 19.0
 Ditto of Forecastle 33.40 GIRTH of Half Midship 30.0 (as per Rule)
 Gross Tonnage 823.00 1st NUMBER 62.9
 Less Crew Space 43.47 2nd NUMBER 12.537
 Less Engine Room 263.39 PROPORTIONS—Breadths to Length 7.11
 Register Tonnage as cut on Beam 516.23 Depths to Length—Upper Deck to Keel 10.49
 Main Deck ditto —

Built at Newcastle on Tyne
 When built 1873 Launched 29 March 73
 By whom built Palmer's Ship Building Iron Co. Ltd.
 Owners Northfleet Coal & Ballast Co. Ltd.
 Port belonging to Newcastle
 Destined Voyage London
 If Surveyed while Building, Afloat, or in Dry Dock. While Building

LENGTH on deck as per Rule 199 Feet. 33 Inches. BREADTH—Moulded... 20 Feet. — Inches. DEPTH top of Floors to Upper Deck Beams 17 Feet. 5 Inches. Power of Engines 80 Horse. No. of Decks with flat laid ONE No. of Tiers of Beams TWO

Dimensions of Ship per Register, length, 200.95 breadth, 28.1 depth, 17.19

KEEL, depth and thickness 8 x 2 3/8 Inches in Ship. 8 x 2 3/8 Inches per Rule.
STEM, moulding and thickness... 8 x 2 3/8
STERN-POST for Rudder do. do. 3 8 1/4 x 4 3/8
 Distance of Frames from moulding edge to moulding edge, all fore and aft 22 in (Class 22 in)
FRAMES, Angle Iron, for 3/4 length amidships 4 x 3 x 7/16
 Do. for 1/2 at each end 4 x 3 x 5/16
REVERSED FRAMES, Angle Iron 3 x 3 x 5/16
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships 18 x 5/16
 thickness at the ends of vessel 7/16
 depth at 3/4 the half-bdth. as per Rule 17 1/2 x 5/16
 height extended at the Bilges... as per Rule
BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron 6 1/2 x 5/16
 Single or double Angle Iron on Upper edge 2 1/2 x 2 1/2 x 5/16
 Average space... 44 in
BEAMS, Main or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron 7 x 7/16
 Single or double Angle Iron, on Upper Edge 2 1/2 x 2 1/2 x 5/16
 Average space... —
BEAMS, Lower Deck, Hold or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron —
 Single or double Angle Iron on Upper Edge —
 Average space... —
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates 26 x 7/16
 " Rider Plate 14 x 6/16
 " Bulb Plate to Intercoastal Keelson 14 x 6/16
 " Angle Irons 4 1/2 x 3 1/2 x 7/16
 " Double Angle Iron Side Keelson 18 x 5/16
 " Side Intercoastal Plates 3 x 3 x 5/16
 " do. Angle Irons 3 x 3 x 5/16
 " Attached to outside plating with angle iron —
BILGE Angle Irons —
 " do. Bulb Iron —
 " do. Intercoastal plates riveted to plating for length 27 x 7/16
BILGE STRINGER Angle Irons —
 Intercoastal plates riveted to plating for length —
SIDE STRINGER Angle Irons 4 1/2 x 3 1/2 x 7/16
 Transoms, material. Knight-heads. Hawse Timbers. Iron plates angled.
 Windlass Harfield's patent Pall Bitt —

Flat Keel Plates, breadth and thickness 33 x 5/16
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges 7/16
 of doubling at Bilge, or increased thickness, and length applied 7/16
 fin up. part of Bilge to lr. edge of Sh'rstrake 7/16
 Main Sheerstrake, breadth and thickness 30 x 9/16
 of doubling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake. 30 x 9/16
 Upr. or Spar Dk Sh'rstrake, brdth & thickness —
 Butt Straps to outside plating, breadth & thickness 8 3/4 x 1 1/4 x 2-2 1/2
 Lengths of Plating SIX SPACES
 Shifts of Plating, and Stringers... TWO SPACES
 Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness... 28 x 5/16
 Angle Iron on ditto 4 1/2 x 3 1/2 x 7/16
 Tie Plates fore and aft, outside Hatchways 10 x 5/16
 Diagonal Tie Plates on Beams No. of Pairs, 3
 Planksheer material and scantling 10 x 5/16
 Waterways do. do. —
 Flat of Upper Deck do. do. 3 1/2 x 5/16
 How fastened to Beams as per Rule
 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 21 x 7/16
 Is the Stringer Plate attached to the outside plating? YES
 Angle Irons on ditto, No. —
 Stringer or Tie Plates, outside Hatchways 4 1/2 x 3 1/2 x 7/16
 Flat of Lower Deck —
 Ceiling between Decks, thickness and material in hold do. 2 1/2 R.A.
 Main piece of Rudder, diameter at head 5
 do. at heel 3
 Can the Rudder be unshipped afloat? YES
 Bulkheads No. 4 Thickness of 5/16
 Height up 3 in. to upper deck
 How secured to sides of ship Double framed
 Size of Vertical Angle Irons 2 x 3 x 7/16 and distance apart 30 ins.
 Are the outside Plates doubled two spaces of Frames in length? yes

The **FRAMES** extend in one length from gunwale to gunwale. Riveted through plates with 3/4 in. Rivets, about 6 in. apart.
 The **REVERSED ANGLE IRONS** on floors and frames extend across middle line to above hold stringers 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 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 3/4 in. diameter, averaging 3 1/4 ins. from centre to centre.
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 5/8 in. diameter averaging 2 3/4 ins. from centre to centre.
 Butts of TWO Strakes at Bilge for 44 length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.
 Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 5/8 in. diameter, averaging 2 3/4 ins. from cr. to cr.
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 5/8 in. diameter, averaging 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 44 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted — length amidships.
 Butts of Main Stringer Plate, treble riveted for 44 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for — length.
 Breadth of laps of plating in double riveting 4 1/4 Breadth of laps of plating in single riveting 2 1/8

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double and Treble as per rule.
 Waterway, how secured to Beams Guttered and nailed. (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? Riveted to frames. No. of Breasthooks, 4 Crutches, 2
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Plates and angles of
 Manufacturer's name or trade mark, Palmer's Ship Building and Iron Co. Ltd.

The above is a correct description.
 Builder's Signature, Palmer's Ship Building and Iron Co. Ltd. Surveyor's Signature, James Dundee
Chas. R. James Secy

11375 2m
Workmanship. Are the butts of plating planed or otherwise fitted? Planed & sheathed
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? Very few in butts only

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

NUMBER for EQUIPMENT		13,790	Fathoms.	Inches.	Test per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
N ^o .	SAILS.	CABLES, &c.	270	17/16	37 3/4	17/16	37 3/4	Bowers ...		18.2.5	19 10/16	18	19
me Sail	Fore Sails,	Chain ... (Machine where Tested, date, and name of Superintendent.)	Leyds Type J. A. R. Russell Esq. 12 April 1872										
	Fore Top Sails,												
	Fore Topmast Stay Sails	Hempen Stream Cable	90	15/16		15 1/16		Stream ...	1	7.3.14		8.0.0	
and	Main Sails,	Hawser ...	90	9		9 1/2				4.3.7		4.0.0	
	Main Top Sails,	Towlines ...	90	5 1/4	✓					2.3.5	✓	2.0.0	
		Warp ...	90	5 1/4									
		quality good	70	4				Kedges ...	2	2.3.5		2.0.0	

Standing and Running Rigging Wire Ropes sufficient in size and good in quality. She has one Life Long Boat and 2 others.
The Windlass is Harfield's Patent. Capstan one and Rudder good Pumps four each one
Engine Room Skylights.—How constructed? Iron coming in How secured in ordinary weather? Blocked down
What arrangements for deadlights in bad weather? deadlights in each hatch
Coal Bunker Openings.—How constructed? Cast Iron Frames How are lids secured? Bar across Height above deck? 6 in. on R. 2 ft. on L.
Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? Five square ports on each side

Cargo Hatchways.—How formed? Iron coming in
State size Main Hatch 18' 6" x 10 Forehatch 14' 9" x 10 Quarterhatch 16' 6" x 10
If of extraordinary size, state how framed and secured? Framed with Oak Beams and Iron coming in
What arrangement for shifting beams? Shifting Beams of Built Iron and angles
Hatches, If strong and efficient? yes

Order for Special Survey No. 1 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought 1872 Jan 27.
Date 1872 Surveys held 2nd. On the plating during the progress of riveting Feb 21. March
Order for Ordinary Survey No. 5 while building 3rd. When the beams were in and fastened, and before the decks were laid 19.31. May 8.
Date April 1872 as per 4th. When the ship was complete, and before the plating was finally coated or cemented 20.
No. 292 in builder's yard. Section 18. 5th. After the ship was launched and equipped

General Remarks,
she is fitted with a Double Bottom - for 112 feet amidships - Plating
7/16 Sides and 5/16 Top.
length of Raised quarter deck 60 feet.

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, forecabin or raised quarter deck, or of double or part double bottom.
How are the surfaces preserved from oxidation? Inside Painted in bottom Outside Paint.
I am of opinion this Vessel should be Classed 80 A . S. marked PT DOUBLE BOTTOM.

The amount of the Entry Fee ... £ 5 : - : - is received by me,
Special ... £ 15 : 15 : -
Certificate ... : 5 : -
(Travelling Expenses)
(if any) £ -
Committee's Minute 27th May 1873
Character assigned 80 A 1
JBW U.C. per double bottom
James Hardie
This vessel appears to comply with the class
80 A 1 as recommended
2. Sides
Double bottom
Rules 1871-2
2007
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