

IRON SHIP. 13408

No. 13022 Survey held at South Shields Date, First Survey 30th April Last Survey 9th October 1874
On the S.S. Fore & Aft. Sr. "Black Watch" Yard Number 108 Master Wm Scott

TONNAGE under Tonnage Deck	173.16
Ditto of Third, Spar, or Aft Deck	
Ditto of Poop, or Raised Or. Dk.	36.42
Ditto of Holdset on Deck	4.89
Ditto of Forecastle	2.78
Gross Tonnage	223.25
Less Gun Space	13.88
	209.37
Less Engine Room	71.44
Register Tonnage as cut on Beams	137.93

ONE, OR TWO DECKED, THREE DECKED VESSEL.	
SPAR, OR AWNING-DECKED VESSEL.	
HALF BREADTH (moulded)	9.9
DEPTH from upper part of Keel to top of Upper Deck Beams	10.11
GIRTH of Half Midship Frame (as per Rule)	18.3
1st NUMBER	38.9
1st NUMBER, if a THREE DECKED VESSEL deduct 7 feet	
LENGTH	124
2nd NUMBER	4823
PROPORTIONS—Breathths to Length	6.3
Depths to Length—Upper Deck to Keel	11.3
Main Deck ditto	

Built at South Shields
When built 1874 Launched 12th August 74
By whom built J. Readhead & Co
Owners R. Thomson
Port belonging to London
Destined Voyage
If Surveyed while Building, Afloat, or in Dry Dock. While building

LENGTH on deck as per Rule	124 0	BREADTH Moulded	19 6	DEPTH top of Floors to Upper Deck Beams	9 11/2	Power of Engines	20	Nº. of Decks with flat laid	One
				Do. do. Main Deck Beams				Nº. of Tiers of Beams	One

Dimensions of Ship per Register, length, 125.3 breadth, 19.7 depth, 10.05

KEEL, depth and thickness	6 3/4 x 1 1/2	Inches per Rule	6 3/4 x 1 1/2
STEM, moulding and thickness	6 1/2 x 1 1/4		6 x 1 1/4
STERN-POST for Rudder do. do.	6 x 2 1/2		6 x 2 1/2
for Propeller	6 x 2 1/2		6 x 2 1/2
Distance of Frames from moulding edge to moulding edge, all fore and aft	21	(Class 90A)	21
FRAMES, Angle Iron, for 1/2 length amidships	3 2 1/2 5	Inches In Ship	3 2 1/2 5
Do. for 1/3 at each end	3 2 1/2 4		3 2 1/2 4
REVERSED FRAMES, Angle Iron	2 1/2 2 1/2 4		2 1/2 2 1/2 4
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	1 1/2 x 5		1 1/2 x 5
thickness at the ends of vessel	4		4
depth at 3/4 the half-bdth. as per Rule	6		5 3/4
height extended at the Bilges	24		23
BEAMS, Upper, Spar, or Aft Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	5 3 7	Approved Section	5 3 7
Single or double Angle Iron on Upper edge			
Average space	42		42
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			
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			
KEELSONS Centre line, single or double plate, box, or intercostal, Plates	9 x 7	8 1/2 x 7	
Rider Plate	7 x 6	6 1/2 x 6	
Bulb Plate to intercostal Keelson			
Angle Irons	3 3 6	3 3 6	
Double Angle Iron Side Keelson			
Side Intercostal Plate			
do. Angle Irons			
Attached to outside plating with angle iron			
BILGE Angle Irons	5 3 6	5 3 6	
do. Bulb Iron			
do. Intercostal plates riveted to plating for length			
BILGE STRINGER Angle Irons			
Intercostal plates riveted to plating for length			
SIDE STRINGER Angle Irons	3 3 6	3 3 6	
Transoms, material. Knight-heads. Hawse Timbers.	Iron		
Windlass	English Oak	Pall Bitt	Eng. Oak.

Flat Keel Plates, breadth and thickness				
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilge of one strake	30	6	30	6
of doubling at Bilge, of increased thickness, and length applied 1/2 length		5		5
fm up. part of Bilge to Ir. edge of Sh'rstrake		5/6		7/6
Main Sheerstrake, breadth and thickness	30	8	30	8
of d'bling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake		5		5
Up. or Spar Dk Sh'rstrake, breadth & thickness				
Butt Straps to outside plating, breadth & thickness	5 1/2 9 1/4	5 1/2 9	5 1/2 9 1/4	5 1/2 9
Lengths of Plating	10 1/2	6 1/2	8 1/2	9 1/2
Shifts of Plating, and Stringers	42		42	
Gunwale Plate on ends of Afting, Spar, or Upper Deck Beams, breadth and thickness	25	6	25	6
Angle Iron on ditto	3 x 3 x 6		3 x 3 x 6	
Tie Plates fore and aft, outside Hatchways	6	6	6	6
Diagonal Tie Plates on Beams No. of Pairs, Planksheer material and scantling				
Waterways do. do.	Iron Cutter			
Flat of Upper Deck do. do.	Yellow Pine	3	3	
How fastened to Beams	Screw bolts & nuts.			
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				
Is the Stringer Plate attached to the outside plating?				
Angle Irons on ditto, No.				
Stringer or Tie Plates, outside Hatchways				
Flat of Lower Deck				
Ceiling between Decks, thickness and material				
in hold do. Baltic Pine	2 1/4		2	
Main piece of Rudder, diameter at head	3 1/2		3 1/2	
do. at heel	2		2	
Can the Rudder be unshipped afloat? Yes.				
Bulkheads No. 4. Thickness of		4	4	
Height up three to upper deck & after one to Cabin sole with iron deck?				
How secured to sides of ship	Double frames & brackets.			
Size of Vertical Angle Irons	2 1/2 x 5 1/2			
and distance apart	30 ins.			
Are the outside Plates doubled two spaces of Frames in length? Yes.				

The FRAMES extend in one length from Keel to Cunwale Riveted through plates with 5/8 in. Rivets, about 5 apart.
The REVERSED ANGLE IRONS on floors and frames extend from middle line to Side Stringer Angle Iron and to Cunwale 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 7/8 in. diameter, averaging 4 1/2 ins. from centre to centre.
Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 5/8 in. diameter, averaging 2 1/2 ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 5/8 in. diameter averaging 2 1/8 ins. from centre to centre.
Butts of one Strake at Bilge for half length, double riveted with Butt Straps 7/6 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 1/2 ins. from cr. to cr.
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 5/8 in. diameter, averaging 2 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, double riveted for whole length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.
Butts of Main Stringer Plate, double riveted for whole length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.
Breadth of laps of plating in double riveting 3 1/4 x 4 1/2 Breadth of laps of plating in single riveting 2 1/2

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble & double riveted
Waterway, how secured to Beams Iron Cutter (Explain by Sketch, if necessary.)
Beams of the various Decks, how secured to the sides? Knee plates riveted to Beams and No. of Breasthooks, Four Crutches, Three
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angles from S. Witham Wakefield,
Manufacturer's name or trade mark. Votryack Sunderland. Plates Stockton Malleable Iron Co. J. Richardson & Sons
West. Hartlepool, & Bowesfield Iron Co Stockton.

The above is a correct description.
Builder's Signature, J. Readhead Surveyor's Signature, J. H. Cooke

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? Solid single pieces
 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

Masts, Bowsprit, Yards, &c., are Pitch Pine 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 13408 In

NUMBER for EQUIPMENT <u>5305</u>		Fathoms.	Inches.	Test per Certificate.	Lngh. & Size req'd pr 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.	
No. <u>One Sheet</u>	SAILS.												
	Fore Sails,						Bowers ...	1	5.0.14	4.9.2.21	5.0.0	7.7.0	
	Fore Top Sails,							1	5.0.4	4.9.2.21	5.0.0	7.7.0	
	Fore Topmast Stay Sails												
	Main Sails,						Stream ...	1	1.3.4		1.3.0		
	Main Top Sails,						Kedges ...	1	1.1.0		1.0.0		
	CABLES, &c.												
	Chain ...	135	13/16	12.0.0.0	135-13/16	11 1/20							
	(State Machine where Tested, Date, & name of Superintendent.)	Breaking Strain 18.0.0.0 Lloyd's June 7 th R. Burrell. Supt. Dates of Certificates 12 th 14 th 15 th Aug. 1874											
	Hmpn Strm Cbl												
	Hawser ...	90	6		90-6								
	Towlines ...	90	4		90-4								
	Warp ...	70	3 1/2										
	quality	good											

Standing and Running Rigging Stemp sufficient in size and good in quality. She has Medice Long Boat and Skiff
 The Windlass is Good Capstan Good and Rudder Good Pumps Good
Engine Room Skylights.—How constructed? Iron Comings & Wood Tops How secured in ordinary weather? Bolted to Angles
 What arrangements for deadlights in bad weather? Solid Shutters & Bulls-eyes
Coal Bunker Openings.—How constructed? Cast Pipes How are lids secured? By Studs Height above deck? 4 1/2
Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? Two Ports each side besides mooring pipes to main deck, Quarter deck flush.
Cargo Hatchways.—How formed? Iron Comings and headledges.
 State size Main Hatch 16 feet x 8 feet Forehatch Good Quarterhatch 7 feet x 7 feet
 If of extraordinary size, state how framed and secured? Ordinary size
 What arrangement for shifting beams? Shifting beam and wood fore & after.
Hatches, If strong and efficient? Yes.

Order for Special Survey No.	Date	1st.	2nd.	3rd.	4th.	5th.
<u>1020</u>	<u>10 March 1874</u>	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
		<u>12 quilt under Special Survey</u>				
		<u>1874 April 30. May 5. 8. 12. 14. 18.</u>				
		<u>21. 30. June 4. 8. 12. 15. 19. 22. 30. July</u>				
		<u>7. 10. 15. 18. 24. 28. Aug. 1. 6. 11. 15. 18. 20.</u>				
		<u>Oct 9.</u>				

General Remarks,
 This is a one decked vessel built in accordance with approved section attached; she has a raised quarter deck 62 feet; bridge house 7 feet and fore-castle 19 ft 6 in length; The main deck stringer plate extends seven frame spaces abaft the break bulkhead and the raised quarter deck stringer plate four frame spaces before the break bulkhead each upon brackets and attached to the outside plating; The sheerstrake is doubled at the break for a length of 19 ft 6 in and a double angle iron stringer 5 x 3 x 5/16 is also fitted under raised quarter deck, extending from aft to the fourth frame before the break bulkhead.
 The general quality of the workmanship is equal to the class recommended for.

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.
 How are the surfaces preserved from oxidation? Inside Cement & Paint Outside Paint

I am of opinion this Vessel should be Classed 90A1
 The amount of the Entry Fee ... £ 3 : : : is received by me,
 Special Certificate ... £ 10 : 9 : .. 28 Oct 1874
 (Travelling Expenses) (if any) £ 4.0.0
 Committee's Minute, 30th October 1874
 Character assigned 90A1
 J. H. Cooke
 This vessel appears eligible to be classed 90A as recommended.
 Lloyd's Register
 1.2M
 R.A.D. 62ft
 B.B. 78
 F. 19 1/2 ft
 29/10/74

Mr. P. Thompson, 6 Water Lane, Tower Street, London, E.C.