

IRON SHIPS.

No. 2009 Survey held at Aberdeen Date, First Survey July 27 1872 Last Survey April 12 1873
On the Douglas Iron Screw Steamer Master Not appointed

Tonnage under Tonnage Deck <u>1197.83</u>	ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.	Half Moulded Breadth.... <u>17.0</u>	Built at <u>Aberdeen</u>
Ditto of Third Spar, or Awning Deck. <u>145.59</u>	Half moulded breadth.... Depth from upper part of Keel to top of Upper Deck Beams..... Girth of Half Midship Frame (as per Rule)...	Total Depth if three or more Decks..... <u>23.12</u>	When built <u>1873</u> Launched <u>Feb 20 1873</u>
Gross Tonnage <u>1343.42</u>	1st Number.....	Total Girth of Half Midship Frame..... <u>34.41</u>	By whom built <u>John Hall Russell & Co</u>
Crew Space, as per Rule <u>69.82</u>	2nd Number....	3rd Number..... <u>67.53</u>	Owners <u>Messrs Morrison & Co</u>
Register Tonnage, out on Beam... <u>459.49</u>	Length..... <u>238.67</u>	4th Number.... <u>70734.3857</u>	Port belonging to <u>Aberdeen</u>
Engine Room <u>564.71</u>	Depths to Length. <u>10.3</u>	Breadths to Length..... <u>4.05</u>	Destined Voyage <u>China</u>
Register Tonnage, as a Steamer, out on Beam			If Surveyed while Building, Afloat, or in Dry Dock. <u>Under special survey</u>

Length on deck as per Rule, 258 Feet. 6 Inches. Moulded Breadth, 34 Feet. 4 Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule..... 27 Feet. 4 Inches. 14 Inches. Power of Engines, 200 Horse. N° of Decks with flat laid 2 N° of Tiers of Beams 2

Dimensions of Ship per Register, length, 240 breadth, 34.7 depth, 21.02

	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.
Keel, if bar iron, depth and thickness.....	<u>8 1/2 x 2 1/4</u>	<u>8 1/2 x 2 1/2</u>	Flat Keel Plates, breadth and thickness.....	<u>31</u>	<u>9 1/8</u>	<u>30</u>	<u>9 1/8</u>	
Do. if centre through plate, depth and thickness.....	<u>8 x 2 1/2</u>	<u>8 x 2 1/2</u>	Plates in Garboard Strakes, breadth and thickness.....	<u>31</u>	<u>9 1/8</u>	<u>30</u>	<u>9 1/8</u>	
Stem, if bar iron, moulding and thickness.....	<u>8 1/2 x 5 1/4</u>	<u>8 1/2 x 5</u>	Do. from Garboard to upper part of Bilges.....	<u>31</u>	<u>9 1/8</u>	<u>30</u>	<u>9 1/8</u>	
Stern-post for Rudder do. do.	<u>8 1/2 x 5 1/4</u>	<u>8 1/2 x 5</u>	Do. of doubling at Bilge, or increased thickness, and length applied.....	<u>31</u>	<u>9 1/8</u>	<u>30</u>	<u>9 1/8</u>	
Stern-post for Propeller.....	<u>23</u>	<u>23</u>	Do. fm up. part of Bilge to lr. edge of Sh'rstrake.....	<u>32</u>	<u>10 1/8</u>	<u>30</u>	<u>10 1/8</u>	
Distance of Frames from moulding edge to moulding edge, all fore and aft.....	<u>23</u>	<u>23</u>	Do. Main Sheerstrake, breadth and thickness.....	<u>32</u>	<u>10 1/8</u>	<u>30</u>	<u>10 1/8</u>	
Frames, size of Angle Iron, for 1/2 length amidships.....	<u>4</u>	<u>3</u>	Do. of d'bling at Sh'rstrake, & length applied.....	<u>34</u>	<u>9 1/8</u>	<u>30</u>	<u>9 1/8</u>	
Do. for 1/2 at each end.....	<u>4</u>	<u>3</u>	Do. from Mn. to Up. or Spar Dk. Sh'rstrake.....	<u>34</u>	<u>9 1/8</u>	<u>30</u>	<u>9 1/8</u>	
Reversed Frames, size of Angle Iron.....	<u>3</u>	<u>3</u>	Do. Up. or Spar Dk Sh'rstrake, brdth & thickness.....	<u>34</u>	<u>9 1/8</u>	<u>30</u>	<u>9 1/8</u>	
Floors, depth and thickness of Floor Plate at mid line for half the length amidships.....	<u>19</u>	<u>19</u>	Butt Straps to outside plating, breadth & thickness.....	<u>21 1/4</u>	<u>15 1/4</u>	<u>2 1/4</u>	<u>15 1/4</u>	
Do. at the ends.....	<u>3.4</u>	<u>3.4</u>	Lengths of Plating.....	<u>2.8</u>	<u>2.8</u>	<u>2.8</u>	<u>2.8</u>	
Do. do. do. at Bilge Keelson.....	<u>10 1/4</u>	<u>9 1/8</u>	Shifts of Plating, and Stringers.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Do. height extended at the Bilges.....	<u>3.2</u>	<u>3.2</u>	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Beams, Upper, Spar, or Awning Deck (No.) single or double Angle Iron, Plate or Tee Bulb Iron.....	<u>6 1/2</u>	<u>6 1/2</u>	Angle Iron on ditto.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Single or double Angle Iron on Upper edge.....	<u>2 1/2</u>	<u>2 1/2</u>	Tie Plates (fore and aft), outside Hatchways.....	<u>11</u>	<u>11</u>	<u>11</u>	<u>11</u>	
Average space.....	<u>3.10</u>	<u>3.10</u>	Diagonal Tie Plates on Beams (No. of Pairs,).....	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
Beams, Main or Middle Deck (No.) single, or double Angle Iron, Plate or Tee Bulb Iron.....	<u>8</u>	<u>8</u>	Planksheer material and scantling.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Single, or double Angle Iron, on Upper Edge.....	<u>3</u>	<u>3</u>	Waterways do. do.	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Average space.....	<u>3.10</u>	<u>3.10</u>	Flat of Upper Deck do. do.	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Beams, Lower Deck, Hold or Orlop (No.) single or double Angle Iron, Plate or Tee Bulb Iron.....	<u>8</u>	<u>8</u>	How fastened to Beams.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Single or double Angle Iron on Upper Edge.....	<u>3</u>	<u>3</u>	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Average space.....	<u>3.10</u>	<u>3.10</u>	(Is the Stringer Plate attached to the outside plating?).....	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	
Keelson Centre line, single or double plate, box, or Intercoastal, size of Plates.....	<u>15 1/2</u>	<u>15 1/2</u>	Angle Irons on ditto (No.).....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Do. Bulb Plate to Intercoastal Keelson.....	<u>5</u>	<u>5</u>	Tie Plates, outside Hatchways.....	<u>11</u>	<u>11</u>	<u>11</u>	<u>11</u>	
Do. Size of Angle Irons.....	<u>5</u>	<u>5</u>	Diagonal Tie Plates on Beams (No. of pairs,).....	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
Do. Side Intercoastal Keelson, size of Plates.....	<u>5</u>	<u>5</u>	Waterways materials and scantlings.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Do. Angle Irons on tops of Floors.....	<u>5</u>	<u>5</u>	Flat of Middle Deck do. do.	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	
Do. Bilge Keelson, Bulb Iron.....	<u>8</u>	<u>8</u>	How fastened to Beams.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Do. do. Intercoastal plates riveted to plating for 1/2 length.....	<u>5 1/4</u>	<u>5 1/4</u>	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams.....	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	
Do. do. Angle Irons.....	<u>5</u>	<u>5</u>	(Is the Stringer Plate attached to the outside plating?).....	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	
Side Stringers (No.) size of Angle Irons.....	<u>5</u>	<u>5</u>	Angle Irons on ditto (No.).....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Do. Intercoastal plates riveted to plating for a length.....	<u>9</u>	<u>9</u>	Stringer or Tie Plates, outside Hatchways.....	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	
Transoms, material <u>Planksheer</u> , if none, in what manner compensated for.....			Flat of Lower Deck.....	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	
Knight-heads <u>Plates</u> Hawse Timbers <u>and frames</u>			Ceiling betwixt Decks, thickness and material.....	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	
Windlass <u>Handspikes</u> Pall Bitt			Do. in hold do. do.	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	
The Frames extend in one length from <u>Keel</u> to <u>Gunwale</u>			Main piece of Rudder, diameter at head.....	<u>5 1/4</u>	<u>5 1/4</u>	<u>5 1/4</u>	<u>5 1/4</u>	
The Reverse Angle Irons on the floors and frames extend <u>across</u> the middle line <u>from Main Deck Stringers to Gunwale</u> alternately			Do. do. at heel.....	<u>3 1/4</u>	<u>3 1/4</u>	<u>3 1/4</u>	<u>3 1/4</u>	
Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u> And are their butts properly shifted? <u>Yes</u>			(Can the Rudder be unshipped afloat? <u>Yes</u>)					
Plates, Garboard, double or Riveted to Keel, double or at upper edge, with Rivets (<u>1/4</u> in.) diameter, averaging (<u>5 1/2</u> ins.) from centre to centre.			Bulkheads No. <u>4</u> Thickness of <u>1/2</u> in.					
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (<u>1/4</u> in.) diameter, averaging (<u>3</u> ins.) from centre to centre.			Do. Height up <u>to Main Deck</u>					
Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (<u>3/8</u> thick, double or single Riveted; with Rivets (<u>1/4</u> in.) diameter averaging (<u>3</u> ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>In</u>			Do. How secured to the sides of the ship <u>between two frames</u>					
Do. of <u>three</u> Strakes at Bilge for <u>half</u> length, treble riveted with Butt Straps <u>1/8</u> thicker than their plates.			Do. Size of Vertical Angle Irons, <u>1 1/2</u> and their distance apart, <u>30</u>					
Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece (<u>1/8</u> thick, or clencher, double or single riveted; with rivets (<u>1/4</u> in.) diameter, averaging (<u>3</u> ins.) from centre to centre.			Do. Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>					
Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge <u>single</u> At lower edge <u>double</u>								
Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (<u>3/8</u> thick, double or single Riveted; with Rivets (<u>1/4</u> in.) diameter, averaging (<u>3</u> ins.) 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 <u>all</u> length amidships. Breadth of laps of plating in double Riveting (<u>4 1/2</u> to <u>5</u>) Breadth of laps of plating in single Riveting (<u>3</u>)								
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? <u>Double & treble riveted</u>								
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? <u>Welded and riveted to the frame</u> No. of Breasthooks, <u>four</u> Crutches, <u>four</u>								
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>Best quality</u>								
Manufacturer's name or trade mark, <u>Palmer, Jarrold & Richardson West Hartlepool</u>								

We certify that the above is a correct description of the several particulars therein given.
Builder's Signature, John Hall Russell & Co Surveyor's Signature, J. R. Russell

Workmanship. Are the butts of plating planed or otherwise fitted? All planed 11216 Iron.
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
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? Yes
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 in corners of Butts

Her Masts, Bowsprit, 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 Length of Main Mast 69.5 ft. of Main Mast 70.5 ft.

Tested by Robert Bunell at
Low Walker November 21 1842

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No.	Number for equipment	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	No.	Weight. Ex. Stock.	Test as per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
	SAILS.						Bowers	3	24.0.5	23.19.2.21	23.2.0	23.10/20
	CABLES, &c.						(State Machine where Tested, and name of Superintendent).		5.0.14			
	Chain	300	19 1/16	44	19 1/16	43 1/20			23.3.14	23.15.2.14	23.2.0	23.10/20
	(State Machine where Tested, and name of Superintendent).								5.7.11			
	Fore Sails,						Stream	1	20.2.8	21.75.3.21	19.3.25	20.10/20
	Fore Top Sails,								3.5.8			
	Fore Topmast Stay Sails	90	12 1/16				Kedges	2	5.0.10		5.0.0	
	Main Sails,	80	10		10				2.2.14		2.2.0	
	Main Top Sails,	80	8		9 1/2							
	Warp	80	6		5							
	All of quality.	80	4									

Her Standing and Running Riggings Good sufficient in size and good in quality. She has 24 Long Boats and four other boats.
The present state of the Windlass is Good Capstan Good and Rudder Good Pumps 2 1/2 ft. Efficient

Engine Room Skylights.—How constructed? They were frame built How secured in ordinary weather? High plan with wire glass

What arrangements are there for deadlights in such for bad weather? None

Coal Bunker Openings.—How constructed? Similar to deck How are lids secured? Covered with tarpaulins How high above deck? 12 ft. in upper Deck

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? Three discharge ports and five scuppers on each side

Cargo Hatchways.—How formed? Iron Channel riveted to beam State size Fore Hatch 11.8 1/2 x 9 0

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

What arrangement for shifting beams? None

Hatches, themselves, whether strong and efficient? Yes Main Hatchways.—State size 11.8 1/2 x 9 0

Order for Special Survey No. 344 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Trust under

Date June 22 1842 Surveys held 2nd. On the plating during the progress of riveting Special survey from

Order for Ordinary Survey No. — while building 3rd. When the beams were in and fastened, and before the decks were laid the 31 July 1842 until

Date — as per 4th. When the ship was complete, and before the plating was finally coated or cemented the 12 April

No. 285 in builder's yard. Section 18. 5th. After the ship was launched and equipped 1843.

General Remarks, The Butt straps to Upper Deck sheestake. Gunwale plate

and of three stakes of plating round the Bulges are 1/16 thicker than the plates they connect and are well secured.

The Belson Bulkhead is extended up to height of upper Deck as suggested by the Committee, and is built in accordance with accompanying tracings submitted and sanctioned as per Secretary's letter dated 3rd June 1842.

In the construction of the house in deck a slight deviation has been made from the rough outline of the house when submitted to the Committee, to which I have directed the attention of the Builders. I now enclose sketch showing how the house is built, and by respectfully to state as my opinion that the stability of the structure is somewhat improved.

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.

In what manner are the surfaces preserved from oxidation? Inside Red Lead Outside Red Lead

I am of opinion this Vessel should be Classed 80 A 1

The amount of the Entry Fee£ 5 : 0 : 0 is received by me,

Special£ 5 : 11 : 6

Certificate Grates

(Travelling Expenses)

(if any) £ None

Committee's Minute 15th April 1843.

Character assigned 80 A 1

Two decked Steel Decked A 1 C P

22/4/73 U.C. 15/11/23

This vessel appears to be eligible for classification as recommended 80 A 1 15/11/23