

# IRON SHIP.

No. 2877 Survey held at Abdeen Date, First Survey Oct 8. 1874 Last Survey April 5 1875

On the Ben. Iron Ship Yard Number 195 Master R. Jaffray

**TONNAGE** under Tonnage Deck 528.8 **ONE, OR TWO DECKED, THREE DECKED VESSEL.** Built at Abdeen

**HALF BREADTH** (moulded) 13.0 **SPAR, OR AWNING DECKED VESSEL.** When built 1875 Launched 11 March 1875

**DEPTH** from upper part of Keel to top of Upper Deck Beams 20.0 By whom built Thos Hall Russell & Co

**GIRTH** of Half Midship Frame (as per Rule) 26.53 Owners Thos J. A. Davidson

**1st NUMBER** 55.33 Port belonging to Abdeen

**2nd NUMBER** 184.83 Destined Voyage Coasting

**PROPORTIONS**—Breadths to Length 1.2 If Surveyed while Building, Afloat, or in Dry Dock. Under Special Survey

**LENGTH** 184.83 **DEPTHS** to Length—Upper Deck to Keel 11.43

**1st NUMBER** 55.33 **2nd NUMBER** 103.92

**Register Tonnage** 401.49 **as cut on Beam**

**LENGTH** on deck as per Rule 184.83 **BREADTH**—Moulded 26 **DEPTH** top of Floors to Upper Deck Beams 14.04 **Power of Engines** 80 **N° of Decks with flat laid** One

**Dimensions of Ship per Register, length, 184.83 breadth, 26.53 depth, 14.44**

	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.
<b>KEEL</b> , depth and thickness	$4\frac{1}{2} \times 2\frac{1}{4}$	$4\frac{1}{2} \times 2\frac{1}{8}$						
<b>STEM</b> , moulding and thickness	$4\frac{1}{4} \times 2$	$6\frac{3}{4} \times 2\frac{1}{8}$						
<b>STERN-POST</b> for Rudder do. do.	$4\frac{1}{2} \times 4\frac{1}{8}$	$6\frac{3}{4} \times 4\frac{1}{4}$						
for Propeller	$4\frac{1}{2} \times 4$	$6\frac{3}{4} \times 4\frac{1}{4}$						
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>22 inches</u>	(Class 90 ft)						
<b>FRAMES</b> , Angle Iron, for $\frac{3}{4}$ length amidships	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$
Do. for $\frac{1}{2}$ at each end	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$	$3\frac{1}{2} \times 3$
<b>REVERSED FRAMES</b> , Angle Iron	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$	$2\frac{1}{2} \times 2\frac{1}{2}$
<b>FLOORS</b> , depth and thickness of Floor Plate at mid line for half length amidships	$15\frac{1}{2} \times \frac{7}{16}$	$15\frac{1}{2} \times \frac{7}{16}$	$15\frac{1}{2} \times \frac{7}{16}$	$15\frac{1}{2} \times \frac{7}{16}$	$15\frac{1}{2} \times \frac{7}{16}$	$15\frac{1}{2} \times \frac{7}{16}$	$15\frac{1}{2} \times \frac{7}{16}$	$15\frac{1}{2} \times \frac{7}{16}$
thickness at the ends of vessel	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$
depth at $\frac{3}{4}$ the half-bdth. as per Rule	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$	$4\frac{3}{4} \times \frac{7}{16}$
height extended at the Bilges	$5\frac{1}{2} \times \frac{7}{16}$	$5\frac{1}{2} \times \frac{7}{16}$	$5\frac{1}{2} \times \frac{7}{16}$	$5\frac{1}{2} \times \frac{7}{16}$	$5\frac{1}{2} \times \frac{7}{16}$	$5\frac{1}{2} \times \frac{7}{16}$	$5\frac{1}{2} \times \frac{7}{16}$	$5\frac{1}{2} \times \frac{7}{16}$
<b>BEAMS</b> , Upper, Spar, or Awning Deck Single or double Angle Iron, Plate or Tee Bulb Iron	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$
Single or double Angle Iron on Upper edge	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$
Average space	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$
<b>BEAMS</b> , Main or Middle Deck Single or double Angle Iron, Plate or Tee Bulb Iron	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$
Single or double Angle Iron, on Upper Edge	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$
Average space	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$
<b>BEAMS</b> , Lower Deck, Hold or Orlop Single or double Angle Iron, Plate or Tee Bulb Iron	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$	$6 \times \frac{7}{16}$
Single or double Angle Iron on Upper Edge	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$	$2\frac{1}{4} \times 2\frac{1}{4}$
Average space	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$	$3.8$
<b>KEELSONS</b> Centre line, single or double plate, box, or intercostal, Plates	$11\frac{1}{2} \times \frac{7}{16}$	$11\frac{1}{2} \times \frac{7}{16}$	$11\frac{1}{2} \times \frac{7}{16}$	$11\frac{1}{2} \times \frac{7}{16}$	$11\frac{1}{2} \times \frac{7}{16}$	$11\frac{1}{2} \times \frac{7}{16}$	$11\frac{1}{2} \times \frac{7}{16}$	$11\frac{1}{2} \times \frac{7}{16}$
" Rider Plate	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$
" Bulb Plate to Intercostal Keelson	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
" Angle Irons	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
" Double Angle Iron Side Keelson	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
" Side Intercostal Plate	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
" do. Angle Irons	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
" Attached to outside plating with angle iron	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
<b>BILGE</b> Angle Irons	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
" do. Bulb Iron	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
" do. Intercostal plates riveted to plating for length	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
<b>BILGE STRINGER</b> Angle Irons	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
Intercostal plates riveted to plating for length	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
<b>SIDE STRINGER</b> Angle Irons	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$	$5 \times 4 \times \frac{7}{16}$
Transoms, material. Knight-heads. Hawse Timbers.	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$
Windlass	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$	$4 \times \frac{7}{16}$

The **FRAMES** extend in one length from Keel to gunwale Riveted through plates with  $\frac{3}{4}$  in. Rivets, about  $\frac{3}{4}$  apart.

The **REVERSED ANGLE IRONS** on floors and frames extend across middle line to gunwale 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 7 in. diameter, averaging  $\frac{1}{4}$  ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets  $\frac{3}{4}$  in. diameter, averaging  $\frac{1}{4}$  ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets  $\frac{3}{4}$  in. diameter averaging  $\frac{1}{4}$  ins. from centre to centre.

Butts of One Strakes at Bilge for half length, treble riveted with Butt Straps  $\frac{7}{16}$  thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets  $\frac{3}{4}$  in. diameter, averaging  $\frac{1}{4}$  ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets  $\frac{3}{4}$  in. diameter, averaging  $\frac{1}{4}$  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 2 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.

Butts of Main Stringer Plate, treble riveted for 2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.

Breadth of laps of plating in double riveting  $\frac{5}{16}$  Breadth of laps of plating in single riveting  $\frac{3}{16}$

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? By lining pieces, double riveted

Waterway, how secured to Beams Butt Waterway (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? Welded Irons riveted No. of Breasthooks, four Crutches, four

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Coasting Iron bars

Manufacturer's name or trade mark, Thos. Hall Russell & Co

The above is a correct description.

Builder's Signature, Thos. Hall Russell & Co Surveyor's Signature, J. P. Little

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IRON460-0488



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

Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies?

Are the fillings between the ribs and plates solid single pieces?

Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other?

Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces?

Do any rivets break into or through the seams or butts of the plating?

Masts, Bowsprit, Yards, &c., are *Red 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 *Length of Fore Mast from Deck to Heads 42 feet 12 inches. Out of Main Mast 40 feet 12 inches.*

Tested by Robert Burrell at  
Low Walker Feb 23<sup>rd</sup> 1875

Tested by Robert Burrell at  
Low Walker Feb 23<sup>rd</sup> 1875

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule	Test req'd per Rule.	ANCHORS, &c.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
N <sup>o</sup> .	SAILS.	CABLES, &c.										
One	Fore Sails,	Chain ...	210	1 1/4	28 1/8	210	Bowers ...	3	13.2.8	15.5.3.27	13.2.0	15 3/4
	Fore Top Sails,	(State Machine where Tested, Date, & name of Superintendent.)			2 1/4	2 1/4			13.2.0	15 1/2	13.2.0	15 3/4
	Fore Topmast Stay Sails	Chain							2.3.4			
	Main Sails,	Ham Strm Cbl	50	10/16					11.3.0	13 1/8	11.1.25	13 1/2
	Main Top Sails,	Hawser ...	90	9 1/2	9 1/2		Stream ...	7	0.0.14	2.4.2.0	0.0.0	
	and	Towlines ...	90	8 1/2	7		Kedges ...	2	3.0.0	5.10.0.0	3.0.0	
		Warp ...	90	5					7.2.4	3.18.3.0	7.2.0	
		quality good	50	5 1/2								

Standing and Running Rigging *all wire & hemp* sufficient in size and good in quality. She has *One* Long Boat and *two* other boats.

The Windlass is *Good* Capstan *Good* and Rudder *Good* Pumps *3 1/2* *Good* efficient

Engine Room Skylights.—How constructed? *Shingled frame with glass* How secured in ordinary weather? *Blocked & beamings*

What arrangements for deadlights in bad weather? *Covered with tarpaulins.*

Coal Bunker Openings.—How constructed? *Cast iron* How are lids secured? *with a bar* Height above deck? *6 feet*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Iron discharge ports and seven scuppers on each side*

Cargo Hatchways.—How formed? *Iron beamings riveted to beams and tie plates*

State size Main Hatch *9.0 x 14.0* Fore hatch *3.0 x 11.0* Quarter hatch *14.10 x 9.0*

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

What arrangement for shifting beams? *One shifting beam in Main & Quarter Hatches*

Hatches, If strong and efficient? *Yes*

Order for Special Survey No. <i>410</i>	DATES of Surveys held while building as per Section 18.	1st.	On the several parts of the frame, when in place, and before the plating was wrought	<i>Built under Special Survey and surveyed</i>
Date <i>Sept 25 1874</i>		2nd.	On the plating during the process of riveting	<i>as follows. Oct 8, 9, 13, 15, 20, 22, 24, 29, 31 Nov 2, 4, 7, 9, 12</i>
Order for Ordinary Survey No. <i>✓</i>		3rd.	When the beams were in and fastened, and before the decks were laid...	<i>18. 20, 24, 26, 28, 30, Dec 2, 4, 7, 10, 14, 15, 17, 19, 25, 27, 31 1874</i>
Date <i>✓</i>		4th.	When the ship was complete, and before the plating was finally coated or cemented.	<i>Jan 7, 9, 13, 21, 22, 27, 30, Feb 2, 4, 6, 10, 13, 15, 17, 19, 23, 25</i>
No. <i>795</i> in builder's yard.		5th.	After the ship was launched and equipped	<i>March 1, 4, 8, 13, 14, 18, 20, 24, 26, 30, April 2<sup>nd</sup> 1875</i>

General Remarks, *Has an Iron deck 5 1/2 inch for a length of 40 feet amidships, and a Raised Quarter Deck for a length of 40 feet; and a Water Ballast Tank for a length of 40 feet, fitted as per sketch, and was filled previous to, and after Launching; and is quite tight; and is built in accordance with accompanying tracings of Midship and Longitudinal Sections as per Secretary's letter dated 19<sup>th</sup> August 1874. With this report I beg to forward sketch of arrangement of pipes &c..*

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 *Red Lead & Portland Cement* Outside *Patent Paint*

I am of opinion this Vessel should be Classed *90A*

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

Special ... £ 30 : 4 : 0 April 5<sup>th</sup> 1875

Certificate ... *Grates*

(Travelling Expenses)

(if any) £ *None*

Committee's Minute *7<sup>th</sup> April 1875*

Character assigned *90A*

*Mc*

*provision*

*TRM*

This vessel appears eligible to be classed 90A as recommended by the Committee.