

IRON SHIPS.

No. 2781 Survey held at Glasgow Date, first Survey - Last Survey 21st March 1868
on the Iron Screw Steamer "St. Clair" Master James Angus

Tonnage under Tonnage Deck } <u>484.10</u>	ONE, OR TWO DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>Glasgow</u>
Ditto of Spar Deck, or Awning Deck. } <u>76.67</u>	Half moulded breadth	Half Moulded Breadth	When built <u>1868</u> Launched <u>Feby 18th 1868</u>
Ditto of Poop, or Raised Qr. Dk. } <u>6.34</u>	Depth from upper part of Keel to top of Upper Deck Beams	Total Depth if three or more Decks	By whom built <u>Randolph Elder & Co.</u>
Ditto of Houses on Deck	Girth of Half Midship Frame	Total Girth of Half Midship Frame	Owners <u>Aberdeen Steam Navigation Co.</u>
Ditto of Forecastle <u>20.93</u>	1st Number	3rd Number	Port belonging to <u>Aberdeen</u>
Gross Tonnage <u>568.57</u>	Length	Length	Destined Voyage <u>Coasting</u>
Crew Space, as per Rule } <u>19.53</u>	2nd Number	4th Number	If Surveyed while Building, Afloat, or in Dry Dock
Total Register Tonnage, out on Beam	Depths to Length	Breadths to Length	<u>Whilst Building and afloat.</u>
Engine Room <u>188.17</u>			
Register Tonnage, as a Steamer, cut on the Beam }			

Length on deck as per Rule, Feet. Inches. Moulded Breadth, Feet. Inches. Depth from top of Keel to Deck Beam, as per Rule . . . Feet. Inches. Power of Engines, 750 effective. Horse. N^o. of Decks, 1 N^o. of Tiers of Beams

Dimensions of Ship per Register, length, 206.5 breadth, 26.6 depth, 14.15

	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	7 X 2 1/2	6 3/4 X 2 1/2						
Do. if centre through plate, depth and thickness								
Stem, if bar iron, moulding and thickness	7 X 2 1/2	6 3/4 X 2 1/2						
Stern-post do. do.	7 3/8 X 4 1/2	6 3/4 X 5						
Distance of Frames from moulding edge to moulding edge, all fore and aft	21	21						
Frames, size of Angle Iron, ^{single} for 1/2 length amidships	3 1/2	3	7/16	3 1/2	2 3/4	7/16		
Do. for 1/3 at each end								
Reversed Frames, size of Angle Iron ^{every} other frame	3	2 1/2	6/16	2 3/4	2 1/2	6/16		
Floors, depth and thickness of Floor Plate at mid line ^{for half the length amidships}	16 3/4		7/16	16 1/2		7/16		
Do. at the ends								
Do. do. do. at Bilge Keelson	9		7/16			7/16		
Do. height extended at the Bilges								
Beams, ^{Three Decked, Spar, or Awning Decked} (No.) ^{single or double} Angle Iron, Plate or Tee Bulb Iron	6	5	7/16	6	5	7/16		
Single or double Angle Iron on Upper edge								
Average space	3	6		3	6			
Beams, Upper or Middle Deck (No.) single, or double Angle Iron, Plate or Tee Bulb Iron								
Single, or double Angle Iron, on Upper Edge								
Average space								
Beams, Lower Deck or Orlop (No.) single, or double Angle Iron, Plate or Tee Bulb Iron								
Single or double Angle Iron on Upper Edge								
Average space								
Keelson Centre line, single or double plate, box, or Intercoastal, size of Plates								
Do. Bulb Plate to Intercoastal Keelson								
Do. Size of Angle Irons								
Do. Side Intercoastal Keelson, size of Plates								
Do. Angle Irons on tops of Floors								
Do. Bilge Keelson, Bulb Iron								
Do. do. Angle Irons								
Do. Side Stringers (No.) size of Angle Irons								

Flat Keel Plates, breadth and thickness				
Plates in Garboard Strakes, breadth and thickness	24	10/16	24	10/16
Do. from Garboard to upper part of Bilges		9/16		9/16
Do. of doubling at Bilge, or increased thickness, and length applied				
Do. from upper part of Bilge to lower edge of Sheerstrake				
Do. Sheerstrake, breadth and thickness	32	9/16	24	9/16
Do. of doubling at Sheerstrake, and length applied				
Butt Straps to outside plating, breadth and thickness	9.9 1/2	10/16	7.8 1/2	10/16
Lengths of Plating				
Shifts of Plating, and Stringers				
Gunwale Plate on ends of ^{Upper} Deck Beams, breadth and thickness	28 1/2	9/16	28 1/2	7/16
Angle Iron on ditto	4 1/2	7/16	4.3	9/16
Tie Plates (fore and aft), outside Hatchways	10	8/16	10	7/16
Diagonal Tie Plates on Beams (No. of Pairs,)				
Planksheer material and scantling				
Waterways do. do. ^{Red Pine}	12 X 6			
Flat of Deck do. do. ^{Y. Pine}	4	3		
How fastened to Beams				
Stringer Plate on ends of Upper or Middle Deck Beams, breadth and thickness				
Angle Irons on ditto (No.)				
Tie Plates, outside Hatchways				
Diagonal Tie Plates on Beams (No. of pairs,)	10	8/16	10	7/16
Waterways materials and scantlings				
Flat of Deck do. do.	3 1/2			
How fastened to Beams				
Stringer Plates on ends of Lower Deck or Orlop Beams	21	8/16	21	7/16
Angle Irons on ditto (No.)				
Stringer or Tie Plates, outside Hatchways	10	7/16	10	7/16
Flat of Deck				
Ceiling betwixt Decks, thickness and material	RED PINE			
Do. in hold do. do.	2 1/2			
Clamps or Spiketting	2 X 6			
Main piece of Rudder, diameter at head		4 1/2	4 1/2	
Do. do. at heel		3 1/2		
(Can the Rudder be unshipped afloat? <u>Yes</u> .)				
Bulkheads No. <u>4</u> Thickness of <u>6/16</u>				
Do. Height up <u>To Main Deck</u>				
Do. How secured to the sides of the ship <u>rivetted between two frames</u>				
Do. Size of Vertical Angle Irons, <u>3.2 1/2</u> and their distance apart, <u>30 Ins.</u>				
Do. Are the outside Plates doubled two spaces of Frames in length? <u>No</u>				

Transoms, material Iron or, if none, in what manner compensated for.

Knight-heads & Hawse Timbers Plates & frames

Windlass - Pall Bitt -

The Frames extend in one length from Keel to Gunwale Riveted through plates with (3/4 in.) Rivets, about 5 ins. apart.

The Reverse Angle Irons on the floors extend across the middle line to Upper part of Bilges

On all the Frames and to the Gunwale on alternate frames

Keelsons ^{How} Are the various lengths of Plates and Angle Irons properly connected? By lining pieces And are their butts properly shifted? -

Plates, Garboard, double - Riveted to Keel, double - at upper edge, with Rivets (1 1/8 in.) diameter, averaging (1 1/2 ins.) from centre to centre.

Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (2 3/4 ins.) from centre to centre.

Do. Butts from Keel to turn of Bilge, worked carvel with butt straps (9/16) thick, treble, double or single Riveted; with Rivets (3/4 in.) diameter averaging (- ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below ? No

Do. Edges of Sheerstrake, double or single Riveted. At upper edge Single At lower edge Double

Do. Butts from Bilge to Planksheers, worked Carvel with Butt Straps (7/16) thick, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (2 1/4 ins.) from centre to centre. Breadth of laps in double Riveting (5 1/2 Dia.) Breadth of laps in single Riveting (3 1/2 Dia.) of Rivets

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double Rivetted

Planksheer, how secured to the plating of the sides, { Explain by Sketch, } Iron Bulwarks

Waterway , , planksheer and to the Beams, { if necessary. } Nut and Screw Bolts

Beams of the various Decks, how secured to the sides? Welded Irons rivetted to the frames No. of Breasthooks, 3 Crutches, 3

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

Manufacturer's name or trade mark, -

We certify that the above is a correct description of the several particulars therein given.

Builder's Signature, (SIGNED) RANDOLPH ELDER & CO. Surveyor's Signature, (SIGNED) T. W. KETTLE

IRONSD00-0277

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? _____
Do the fillings between the ribs and plates fill in solid with single pieces? _____ or are they in short lengths of various thicknesses? _____
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? _____ and are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? _____
Are there any rivets which either break into or have been put through the seams or butts of the plating? _____

Her Masts, Bowsprit, Yards, &c., are ^{WOOD} 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 _____

Tested by M. K. Keade at Lloyd's
Netherton Proving House Jan'y 16 & 20th, 1868.

N ^o .	Number for equipment		Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
	SAILS.	CABLES, &c.											
One drift	Fore Sails,	Chain	240	1 1/4				Bowers					
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).						(State Machine where Tested, and name of Superintendent).					
	Fore Topmast Stay Sails	Hamper Stream Cable	90	1 1/2				Stream					
	Main Sails,	Hawser	90	7/8									
	Main Top Sails,	Towlines ...	90	5 1/4									
		Warp	90	4 1/2									
and		All of good quality.	90	3 1/2				Kedges					

Her Standing and Running Rigging Galv'd Wire & Hemp sufficient in size and _____ in quality. She has One 22.0 Long Boat and two 24.0 Life Boats & one 22.0 Quarter Boat.
The present state of the Windlass is ✓ Capstan Iron and Rudder Iron Pumps New & efficient

Engine Room Skylights.—How constructed? _____ How secured in ordinary weather? _____

What arrangements are there for deadlights in such for bad weather? _____

Coal Bunker Openings.—How constructed? _____ How are lids secured? _____ How high above 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? _____

Cargo Hatchways.—How formed? _____ State size _____

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

What arrangement for shifting beams? _____

Hatches, themselves, whether strong and efficient? _____ **Main Hatchways.**—State size _____

Order for Special Survey No. 506 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Built Under
Date Oct'r 11/67 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 14th October, 1867
Date ✓ as per 4th. When the ship was complete, and before the plating was finally coated or cemented until the
No. _____ in builder's yard. Section 18. 5th. After the ship was launched and equipped 21st March 1868

General Remarks, This vessel is built in conformity with Midship section submitted and sanctioned as per Secretary's letter of the 1st November, 1867.
The sheerstrake is doubled all its depth for 3/4 length Amidships plate; the Gunwale plate is increased 1/16 of an Inch for one 1/2 the Vessel amidships. Has a bull bar 6 1/2 x 5/16 rivetted between double Angle lower part of bilges for half the vessel's length amidships: has -costal keelson for 88.0 amidships 5/16 thick rivetted between Bars. 4 1/2 x 3 x 7/16. Has a plate 9 x 5/16 rivetted between double Angle Bars 3 x 3 x 7/16 to outside plating at turn of bilge for a length of 800 each side. The floors under Engine and Boilers are 10/16 thick, and the frames under Engine are doubled to upper part of bilge. The Plating is done and single rivetted in accordance with the rules, but the plating for 1000' amidships is double rivetted from keel to Gunwale. The floors at after end of Vessel are plated over with 1/16 plates for a length of 56 Feet and is fitted as per accompanying sketch at the owner's request, but I am doubtful of its efficiency. The third Bower anchor is ^{Est'd 21st} 6. 1. 20 lighter than the Requirements of the Rules as per Table 22, but the Builders are willing to supply a heavier anchor if the Committee require it that I beg respectfully to leave for the Committee's consideration assigning the figure 1.

In what manner are the surfaces preserved from oxidation? Inside Portland Cement and Red Lead Outside Red Lead and Patent Paint

I am of opinion this Vessel should be Classed _____

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

Travelling Expenses (if any)£ : :

Special£ : :

Certificate : :

Committee's Minute _____ 18 _____

Character assigned _____

(SIGNED) T. W. KETTLE.



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Foundation