

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. }	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>76.67</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 } <u>6.34</u>	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 . . . } <u>380.34</u>	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 } <u>-</u>			

Length on deck as per Rule, 206.5 Feet. Moulded Breadth, 26.6 Feet. Depth from top of Keel to Deck Beam, as per Rule, 14.15 Feet. Power of Engines, 750 Horse. N^o. of Decks, 1 N^o. of Tiers of Beams, -

Dimensions of Ship per Register, length, <u>206.5</u> breadth, <u>26.6</u> depth, <u>14.15</u>	Inches in Ship		Inches required per Rule		Inches in Ship	Inches required per Rule		Inches in Ship	Inches required per Rule	
	Inches	Inches	Inches	Inches		Inches	Inches		Inches	Inches
Keel, if bar iron, depth and thickness	<u>7</u>	<u>2 1/2</u>	<u>6 3/4</u>	<u>2 1/2</u>						
Do. if centre through plate, depth and thickness										
Stem, if bar iron, moulding and thickness	<u>7</u>	<u>2 1/2</u>	<u>6 3/4</u>	<u>2 1/2</u>						
Stern-post do. do. do.	<u>7 3/8</u>	<u>4 1/2</u>	<u>6 3/4</u>	<u>5</u>						
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>21</u>		<u>21</u>							
Frames, size of Angle Iron, <u>single</u> for <u>3</u> length amidships	<u>3 1/2</u>	<u>3</u>	<u>3 1/2</u>	<u>2 3/4</u>	<u>3 1/2</u>	<u>2 3/4</u>	<u>3 1/2</u>	<u>2 3/4</u>	<u>3 1/2</u>	<u>2 3/4</u>
Do. for 1/3 at each end										
Reversed Frames, size of Angle Iron <u>every other frame</u>	<u>3</u>	<u>2 1/2</u>	<u>2 3/4</u>	<u>2 1/2</u>	<u>2 3/4</u>	<u>2 1/2</u>	<u>2 3/4</u>	<u>2 1/2</u>	<u>2 3/4</u>	<u>2 1/2</u>
Floors, depth and thickness of Floor Plate at mid line <u>for half the length amidships</u>	<u>16 3/4</u>		<u>16 1/2</u>		<u>16 1/2</u>		<u>16 1/2</u>		<u>16 1/2</u>	
Do. at the ends										
Do. do. do. at Bilge Keelson	<u>9</u>		<u>9</u>		<u>9</u>		<u>9</u>		<u>9</u>	
Do. height extended at the Bilges										
Beams, <u>Three Decked, Spar, or Awning Decked</u> (No.) <u>single or double</u> Angle Iron, Plate or Tee Bulb Iron	<u>6</u>	<u>5</u>	<u>6</u>	<u>5</u>	<u>6</u>	<u>5</u>	<u>6</u>	<u>5</u>	<u>6</u>	<u>5</u>
Single or double Angle Iron on Upper edge										
Average space <u>between</u>	<u>3</u>	<u>6</u>	<u>3</u>	<u>6</u>	<u>3</u>	<u>6</u>	<u>3</u>	<u>6</u>	<u>3</u>	<u>6</u>
Beams, Upper or Middle Deck (No.) <u>single</u> 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.) <u>single</u> or double Angle Iron, Plate or Tee Bulb Iron										
Single or double Angle Iron on Upper Edge										
Average space										
Keelson Centre line, <u>single or double</u> plate, box, or Intercostal, size of Plates										
Do. Bulb Plate to Intercostal Keelson										
Do. Size of Angle Irons										
Do. Side Intercostal 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										

	Inches in Ship	16ths in Ship	Inches required per Rule	10ths required per Rule
Flat Keel Plates, breadth and thickness				
Plates in Garboard Strakes, breadth and thickness	<u>24</u>	<u>10/16</u>	<u>24</u>	<u>10/16</u>
Do. from Garboard to upper part of Bilges		<u>9/16</u>		<u>9/16</u>
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	<u>32</u>	<u>9/16</u>	<u>24</u>	<u>9/16</u>
Do. of doubling at Sheerstrake, and length applied				
Butt Straps to outside plating, breadth and thickness	<u>9.9 1/2</u>	<u>10/16</u>	<u>7.8 1/2</u>	<u>10/16</u>
Lengths of Plating				
Shifts of Plating, and Stringers				
Gunwale Plate on ends of <u>Awning, or Spar</u> Deck Beams, breadth and thickness	<u>28 1/2</u>	<u>9/16</u>	<u>28 1/2</u>	<u>7/16</u>
Angle Iron on ditto	<u>4 1/2</u>	<u>7/16</u>	<u>4.3</u>	<u>9/16</u>
Tie Plates (fore and aft), outside Hatchways	<u>10</u>	<u>8/16</u>	<u>10</u>	<u>7/16</u>
Diagonal Tie Plates on Beams (No. of Pairs,)				
Planksheer material and scantling	<u>Iron Bulwarks</u>			
Waterways do. do. <u>Red Pine</u>	<u>12 x 6</u>			
Flat of Deck do. do. <u>Y. Pine</u>	<u>4</u>	<u>3</u>		
How fastened to Beams	<u>Nut & Screw Bolts</u>			
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 <u>Upper Deck</u> on Beams (No. of pairs,)	<u>10</u>	<u>8/16</u>	<u>10</u>	<u>7/16</u>
Waterways materials and scantlings				
Flat of Deck <u>Lower</u> do. do.	<u>3 1/2</u>			
How fastened to Beams				
Stringer Plates on ends of <u>Lower Deck or Orlop</u> Beams, breadth and thickness	<u>21</u>	<u>8/16</u>	<u>21</u>	<u>7/16</u>
Angle Irons on ditto (No.)				
Stringer or Tie Plates, outside Hatchways	<u>10</u>	<u>7/16</u>	<u>10</u>	<u>7/16</u>
Flat of Deck				
Ceiling betwixt Decks, thickness and material	<u>RED PINE</u>			
Do. in hold do. do.	<u>2 1/2</u>			
Clamps or Spircketting	<u>2 x 6</u>			
Main piece of Rudder, diameter at head		<u>4 1/2</u>	<u>4 1/2</u>	
Do. do. at heel		<u>3 1/2</u>		
(Can the Rudder be unshipped afloat? <u>Yes</u> .)				
Bulkheads No. <u>4</u> Thickness of <u>1/2</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</u>				
Do. Are the outside Plates doubled two spaces of Frames in length? <u>-</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 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 Are the various lengths of Plates and Angle Irons properly connected? By lining pieces And are their butts properly shifted? -
 Plates, Garboard, double or Riveted to Keel, double or 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 Diam. of Rivets) Breadth of laps in single Riveting (3 1/2 Diam. 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 Arms 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

