

# IRON SHIPS.

No. 3557 Survey held at Glasgow Date, First Survey 15<sup>th</sup> Sept. 1871 Last Survey 25<sup>th</sup> Sept. 1872  
 On the S. S. "Elizabeth Martin" Master R. Duncan  
 Tonnage under Tonnage Deck 1225.86 ONE, OR TWO DECKED, SPAR, OR AWNING DECKED VESSELS. Half Moulded Breadth... 15.0 Built at Glasgow  
 Ditto of Third Spar, or Awning Deck. ✓ Total Depth if three or more Decks... 23.3 When built 1871-72 Launched 23<sup>rd</sup> May 1872  
 Ditto of Poop, or Raised Or. Dk. ✓ Total Girth of Half Mid-ship Frame... 34.8 By whom built R. Napier & Sons  
 Ditto of Houses on Deck... 20.56 3rd Number... 73.1 Ownery Alexr Currie  
 Ditto of Forecastle ✓ Length... 248.8 Port belonging to Greenock  
 Gross Tonnage 1246.42 1st Number... 66.1 Destined Voyage Clyde to Cape of Good Hope  
 Crew Space, 38.38 Length... 248.8 and and  
 Register Tonnage, 1246.42 2nd Number... 16445 Surveyed while Building, Afloat, or in Dry Dock.  
 Engine Room 398.85 Depths to Length. 10.8  
 Register Tonnage, as a Steamer, out on Beam 809.19 15.9 Breadths to Length... 8.2

Length on deck as per Rule, 248 Feet. 8 Inches. Moulded Breadth, 30 Feet. 1 Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule... 21 Feet. 5 Inches. Power of Engines, 130 Horse. No. of Decks with flat laid Two No. of Tiers of Beams Three

Dimensions of Ship per Register, length, 250.6 breadth, 30.25 depth, 21.5

	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 1/2</u>	<u>8 1/2 x 2 1/2</u>				
Do. if centre through plate, depth and thickness	<u>8 x 2 1/2</u>	<u>8 x 2 1/2</u>				
Stem, if bar iron, moulding and thickness	<u>8 x 5</u>	<u>8 x 5</u>				
Stern-post for Rudder do. do.	<u>8 x 5</u>	<u>8 x 5</u>				
Stern-post for Propeller	<u>23</u>	<u>23</u>				
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>23</u>	<u>23</u>				
Frames, size of Angle Iron, for 1/2 length amidships	<u>4 3/4 x 7</u>	<u>4 3/4 x 7</u>				
Do. for 1/2 at each end	<u>4 3/4 x 6</u>	<u>4 3/4 x 6</u>				
Reversed Frames, size of Angle Iron	<u>3 3/4 x 6</u>	<u>3 3/4 x 6</u>				
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	<u>18 1/2</u>	<u>18 1/2</u>				
Do. at the ends	<u>9 1/6</u>	<u>7 1/6</u>				
Do. do. do. at Bilge Keelson	<u>Twice</u>	<u>Twice</u>				
Do. height extended at the Bilges	<u>Twice</u>	<u>Twice</u>				
Beams, Upper, Spar, or Awning Deck (No. )	<u>6 1/2 x 6</u>	<u>6 1/2 x 6</u>				
Angle or double Angle Iron, Plate or Tee Bulb Iron	<u>2 1/2 x 5</u>	<u>2 1/2 x 5</u>				
Angle or double Angle Iron on Upper edge	<u>4 6</u>	<u>4 6</u>				
Average space	<u>7 1/2 x 7</u>	<u>7 1/2 x 7</u>				
Beams, Main or Middle Deck (No. )	<u>3 2 1/2 x 5</u>	<u>3 2 1/2 x 5</u>				
Angle or double Angle Iron, Plate or Tee Bulb Iron	<u>4 6</u>	<u>4 6</u>				
Angle or double Angle Iron on Upper Edge	<u>9 2</u>	<u>9 2</u>				
Average space	<u>10 x 12</u>	<u>15 x 12</u>				
Keelson Centre line, single or double plate, box, or Intercoastal, size of Plates	<u>7 3/4 x 9</u>	<u>7 3/4 x 9</u>				
Plate to Intercoastal Keelson	<u>5 3/4 x 8</u>	<u>5 3/4 x 8</u>				
Size of Angle Irons	<u>5 3/4 x 8</u>	<u>5 3/4 x 8</u>				
Do. Side Intercoastal Keelson, size of Plates	<u>5 3/4 x 9</u>	<u>5 3/4 x 9</u>				
Do. Angle Irons on tops of Floors	<u>5 3/4 x 9</u>	<u>5 3/4 x 9</u>				
Do. Bilge Keelson, <u>Double</u> Intercoastal plates riveted to plating for 1/2 length	<u>5 3/4 x 9</u>	<u>5 3/4 x 9</u>				
Do. do. Angle Irons	<u>5 3/4 x 9</u>	<u>5 3/4 x 9</u>				
Side Stringers (No. ) size of Angle Irons	<u>5 3/4 x 9</u>	<u>5 3/4 x 9</u>				
Do. Intercoastal plates riveted to plating for 3/4 length	<u>5 3/4 x 9</u>	<u>5 3/4 x 9</u>				
Transoms, material <u>Iron</u> or, if none, in what manner compensated for.						
Night-heads <u>Iron</u> Hawse Timbers <u>Iron</u>						
Endlass <u>Napier's Patent</u> Pall Bitt						
The Frames extend in one length from <u>Keel</u> to <u>Gunwale</u>						
The Reverse Angle Irons on the floors and frames extend <u>from</u> the middle line to <u>upper</u> and to <u>Main Deck</u> alternately						
Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u> And are their butts properly shifted? <u>Yes</u>						
Plates, Garboard, double <u>or</u> Riveted to Keel, double <u>or</u> at upper edge, with Rivets ( <u>13/16</u> in.) diameter, averaging ( <u>3 1/2</u> ins.) from centre to centre.						
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double <u>or</u> single Riveted; with Rivets ( <u>3/4</u> in.) diameter, averaging ( <u>3 3/8</u> ins.) from centre to centre.						
Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes ( <u>11/16</u> ) thick, double <u>or</u> single Riveted; with Rivets ( <u>3/4</u> in.) diameter averaging ( <u>3 3/8</u> ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>No</u>						
Do. of <u>3</u> Strakes at Bilge for <u>1/2</u> length, treble riveted with Butt Straps <u>1/16</u> thicker than their plates.						
Do. Edges from bilge to Main Sheerstrake, worked <u>carvel</u> with a lining piece ( <u>11/16</u> ) thick, <u>or</u> clencher, double <u>or</u> single Riveted; with rivets ( <u>3/4</u> in.) diameter, averaging ( <u>3 3/8</u> ins.) from centre to centre.						
Do. Edges of Sheerstrake, Main, double <u>or</u> 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>11/16</u> ) thick, double <u>or</u> single Riveted; with Rivets ( <u>3/4</u> in.) diameter, averaging ( <u>3 3/8</u> ins.) from centre to centre.						
Do. Butts of Main Sheerstrake, double <u>or</u> single Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double <u>or</u> treble Riveted for <u>1/2</u> length amidships. Breadth of laps of plating in double Riveting ( <u>6 times</u> ) Breadth of laps of plating in single Riveting ( <u>3 1/2 times</u> )						
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? <u>Treble and Double</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>Rivets riveted to Frames</u> No. of Breasthooks, <u>5</u> Crutches, <u>5</u>						
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>B. Boiler</u>						
Manufacturer's name or trade mark, <u>Blochaim and Mossend</u>						
We certify that the above is a correct description of the several particulars therein given.						
Builder's Signature, <u>Builders Absent</u> Surveyor's Signature, <u>Saml. Laffrone</u>						

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  
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? Solid pieces  
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

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 Three Masts of Oregon Pine, Schooner Rigged

10663 Iron

Tested at Bristol 23<sup>rd</sup> Decr 1871  
by John Sanders

N <sup>o</sup> .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.
	Number for equipment <u>18087</u>						
	Fore Sails,	Chain .....	300	19 1/16	44	19 1/16	43 1/20
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).					
	Fore Topmast Stay Sails	Hempen Stream	90	1		1	
	Main Sails,	Iron Cable	90	9 1/2		9 1/2	
	Main Top Sails,	Hawser .....	90	6 1/2		6	
		Towlines ....	90	5 1/2			
		Warp .....	90	5 1/2			
		All of <u>good</u> quality.	180	5 1/2			

Tested at Bristol 28<sup>th</sup> Nov 1871  
by John Sanders

ANCHORS, &c.	N <sup>o</sup> .	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
3 <sup>rd</sup> light		23.0.25	23.15.1.7	23 1/2	23 1/2
5 <sup>th</sup> light		23.1.23	23.9.0.7	23 1/2	23 1/2
18 heavy		20.0.15	20.17.0.2	19.3.25	20
Stream		9.3.16		10	
4 <sup>th</sup> light		5.0.21		5	
21 heavy		2.2.9		2 1/2	
2 heavy					

Her Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has Four very Boats and 2 fitted as life boats.  
The present state of the Windlass is good Capstan — and Rudder good Pumps good and efficient  
Engine Room Skylights.—How constructed? Teak Frame on Iron House How secured in ordinary weather? By brass bars  
What arrangements are there for deadlights in such for bad weather? Thick Glass and Paulines  
Coal Bunker Openings.—How constructed? Iron Castings How are lids secured? Screwed How high above deck? Flush  
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? Flush deck

Cargo Hatchways.—How formed? Plate and Angle Iron State size 6'6" x 7'0" - 7'6" x 8'0"

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

What arrangement for shifting beams? Two shifting Beams in Main Hatch

Hatches, themselves, whether strong and efficient? Yes Main Hatchways.—State size 19'6" x 11'0"

Order for Special Survey No. 216 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Under Special  
Date Sept. 23<sup>rd</sup> 71 Surveys held 2nd. On the plating during the progress of riveting Survey from 15<sup>th</sup> Sept  
Order for Ordinary Survey No. — while building 3rd. When the beams were in and fastened, and before the decks were laid 1871 16 - 25<sup>th</sup> Sept 18  
Date — as per 4th. When the ship was complete, and before the plating was finally coated or cemented —  
No. 216 in builder's yard. Section 18. 5th. After the ship was launched and equipped —

General Remarks, This vessel has been built in accordance with the appended Midship Section and in general conformity with the Rules with a view to Class 100 A

It will be observed that the Main Deck Stringer Plate is rather narrower than required without Diagonals, on account of the Topsides Plating being increased 2/16<sup>th</sup> in thickness, and its lower edge double riveted instead of single; the Main Deck Sheerstrake is also 6 ins wider than required

The construction of Middle Line Bulson was arranged by the Owners and approved by Committee in S.S. Edinburgh Castle No 3493 and Windsor Castle 3524

She is fitted with a water tight Ballast Tank amidships about 18'4" long at height of lower course of Beams plated with 7/16 iron.

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 Cement & Paint Outside Paint

I am of opinion this Vessel should be Classed 100 A 1 - 3 Decks

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

Special .....£ 56 : 3 :  
Certificate .... Waters

(Travelling Expenses)  
(if any) £ —

Committee's Minute 18

Character assigned —



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