

IRON SHIPS.

Recd 26/6/71

No. 5967 Survey held at Port Glasgow Date, first Survey 20th January Last Survey 9th June 1871

on the Ship "Commonwealth" Master Scobie

Tonnage under Tonnage Deck	1178.11	ONE, OR TWO DECKED THREE DECKED VESSELS.	Built at <u>Port Glasgow</u>
Ditto of Spar Deck, or Awning Deck.		Half Moulded Breadth	When built <u>1871</u> Launched <u>5th June 1871</u>
Ditto of <u>Deck</u> , Raised Or. Dk.	<u>22.41</u>	Depth from upper part of Keel to top of Upper Deck Beams	By whom built <u>John Reid & Co.</u>
Ditto of Houses on Deck	<u>18.60</u>	Girth of Half Frame	Owners <u>John Kerr & Co.</u>
Ditto of Forecastle	<u>35.68</u>	1st Number	Port belonging to <u>Glenash</u>
Gross Tonnage	<u>1254.80</u>	Length	Destined Voyage <u>Glasgow to Java</u>
Crew Space, as per Rule	<u>56.04</u>	2nd Number	If Surveyed while Building, Afloat, or in Dry Dock
Register Tonnage, cut on Beam	<u>1198.76</u>	3rd Number	<u>While building and Afloat</u>
Engine Room		4th Number	
Register Tonnage, as a Steamy, cut on the Beam		5th Number	
		6th Number	

Length on deck as per Rule	Feet. Inches. <u>219.0</u>	Moulded Breadth	Feet. Inches. <u>36.66</u>	Depth from top of Keel to Deck Beam, as per Rule	Feet. Inches. <u>25.50</u>	Power of Engines	Horse	N ^o . of Decks, <u>Two</u>	N ^o . of Tiers of Beams <u>Two</u>
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Dimensions of Ship per Register, length, 231 breadth, 37 depth, 23.4

	Inches in Ship		Inches required per Rule		Flat Keel Plates, breadth and thickness	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	16ths. required per Rule.
	In Ship	In Ship	Inches. required per Rule.	16ths. required per Rule.					
Keel, if bar iron, depth and thickness	<u>8 1/2</u>	<u>3</u>	<u>9</u>	<u>2 1/2</u>	Plates in Garboard Strakes, breadth and thickness	<u>36</u>	<u>17 1/2</u>	<u>36</u>	<u>46</u>
Do. if centre through plate, depth and thickness					Do. from Garboard to upper part of Bilges		<u>17 1/2</u>		<u>46</u>
Stem, if bar iron, moulding and thickness	<u>8</u>	<u>23/4</u>	<u>8 1/2</u>	<u>2 1/2</u>	Do. of doubling at Bilge, or increased thickness, and length applied				
Stern-post do. do. do.	<u>8</u>	<u>23/4</u>	<u>8 1/2</u>	<u>2 1/2</u>	Do. from upper part of Bilge to lower edge of Sheerstrake		<u>17 1/2</u>		<u>46</u>
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>23</u>		<u>24</u>		Do. Sheerstrake, breadth and thickness	<u>36</u>	<u>17 1/2</u>	<u>36</u>	<u>46</u>
Frames, size of Angle Iron, for 1/2 length amidships	<u>5</u>	<u>3</u>	<u>4 1/2</u>	<u>3 1/2</u>	Do. of doubling at Sheerstrake, and length applied				
Do. for 1/2 at each end	<u>5</u>	<u>3</u>	<u>4 1/2</u>	<u>3 1/2</u>	Butt Straps to outside plating, breadth and thickness	<u>10 1/2</u>	<u>11 1/2</u>	<u>16 1/2</u>	<u>12 1/2</u>
Reversed Frames, size of Angle Iron	<u>3 1/2</u>	<u>3</u>	<u>3</u>	<u>3</u>	Lengths of Plating	<u>Six frames</u>		<u>Six frames</u>	
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	<u>25</u>	<u>10 1/2</u>	<u>22 1/2</u>	<u>9 1/2</u>	Shifts of Plating, and Stringers	<u>Two frames</u>		<u>Two frames</u>	
Do. at the ends	<u>5</u>	<u>10 1/2</u>	<u>5</u>	<u>4 1/2</u>	Gunwale Plate on ends of Awning, or Spar Deck Beams, breadth and thickness				
Do. do. do. at Bilge Keelson	<u>12</u>	<u>10 1/2</u>		<u>4 1/2</u>	Angle Iron on ditto				
Do. height extended at the Bilges	<u>17 feet</u>				Tie Plates (fore and aft), outside Hatchways				
Beams, Three Decked, Spar, or Awning Decked (No.) single or double Angle Iron, Plate or Tee Bulb Iron					Diagonal Tie Plates on Beams (No. of Pairs)				
Single or double Angle Iron on Upper edge					Planksheer material and scantling				
Average space					Waterways do. do.				
Beams, Upper or Middle Deck (No.) single, or double Angle Iron, Plate or Tee Bulb Iron	<u>9</u>	<u>5 1/2</u>	<u>9 1/2</u>	<u>3</u>	Flat of Deck do. do.				
Single, or double Angle Iron, on Upper Edge					How fastened to Beams				
Average space	<u>46 inches</u>		<u>48 inches</u>		Stringer Plate on ends of Upper or Middle Deck	<u>31</u>	<u>17 1/2</u>	<u>31</u>	<u>46</u>
Beams, Lower Deck or Orlop (No.) single or double Angle Iron, Plate or Tee Bulb Iron	<u>9</u>	<u>5 1/2</u>	<u>9 1/2</u>	<u>3</u>	Beams, breadth and thickness				
Single or double Angle Iron on Upper Edge					Angle Irons on ditto (No.)	<u>5 x 4</u>	<u>9 1/2</u>	<u>5 x 4</u>	<u>9 1/2</u>
Average space	<u>46 inches</u>		<u>48 inches</u>		Tie Plates, outside Hatchways	<u>11</u>	<u>17 1/2</u>	<u>10</u>	<u>46</u>
Keelson Centre line, single or double plate, box, or intercostal, size of Plates	<u>11 1/2 x 2 1/2</u>	<u>2 1/2</u>	<u>11 1/2 x 2 1/2</u>	<u>2 1/2</u>	Diagonal Tie Plates on Beams (No. of pairs)	<u>11</u>	<u>17 1/2</u>	<u>10</u>	<u>46</u>
Do. Bulb Plate to Intercostal Keelson					Waterways materials and scantlings				
Do. Size of Angle Irons	<u>2 1/2</u>	<u>4</u>	<u>2 1/2</u>	<u>4</u>	Flat of Deck do. do.	<u>4</u>		<u>4</u>	
Do. Side Intercostal Keelson, size of Plates	<u>2 1/2</u>	<u>4</u>	<u>2 1/2</u>	<u>4</u>	How fastened to Beams	<u>By Butts and screw bolts</u>			
Do. Angle Irons on tops of Floors	<u>5</u>	<u>4</u>	<u>5</u>	<u>4</u>	Stringer Plates on ends of Lower Deck or Orlop	<u>24</u>	<u>17 1/2</u>	<u>23</u>	<u>46</u>
Do. Bilge Keelson, Bulb Iron	<u>5</u>	<u>4</u>	<u>5</u>	<u>4</u>	Beams				
Do. do. Angle Irons	<u>5</u>	<u>4</u>	<u>5</u>	<u>4</u>	Angle Irons on ditto (No.)	<u>5 x 4</u>	<u>9 1/2</u>	<u>4 x 4</u>	<u>9 1/2</u>
Do. Side Stringers (No. one pair) size of Angle Irons	<u>5</u>	<u>4</u>	<u>5</u>	<u>4</u>	Stringer or Tie Plates, outside Hatchways	<u>11</u>	<u>17 1/2</u>	<u>10</u>	<u>46</u>
Transoms, material <u>Iron</u> or, if none, in what manner compensated for.					Flat of Deck	<u>3</u>		<u>3</u>	
Knight-heads <u>Iron</u> Hawse Timbers <u>Iron</u>					Ceiling betwixt Decks, thickness and material	<u>1 1/2</u>		<u>1 1/2</u>	
Windlass <u>Iron Patent</u> Pall Bitt <u>Not any</u>					Do. in hold do.	<u>2 1/2</u>		<u>2 1/2</u>	
The Frames extend in one length from <u>Keel</u> to <u>Gunwale</u>					Clamps or Spirketting	<u>American Rock Bolt</u>			
The Reverse Angle Irons on the floors extend across the middle line <u>to above the hold beam stringer</u>					Main piece of Rudder, diameter at head	<u>6</u>		<u>5 1/2</u>	
On all the Frames, and to <u>Gunwale plate on alternate frames</u>					Do. do. at heel	<u>3 1/4</u>		<u>3</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 <u>single</u> Riveted to Keel, double or <u>single</u> Riveted; with Rivets (<u>1 1/8</u> in.) diameter, averaging (<u>6 1/2</u> ins.) from centre to centre.					Bulkheads No. <u>One</u> Thickness of		<u>7 1/2</u>	<u>7 1/2</u>	
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or <u>single</u> Riveted; with Rivets (<u>1 1/8</u> in.) diameter, averaging (<u>3 1/2</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 (<u>1 1/2</u> in.) thick, treble or double or <u>single</u> Riveted; with Rivets (<u>1 1/8</u> in.) diameter averaging (<u>3 1/2</u> ins.) from centre to centre.					Do. How secured to the sides of the ship <u>Between double frames</u>				
Do. Edges of Sheerstrake, double or single Riveted. At upper edge <u>Single</u> At lower edge <u>Double</u>					Do. Size of Vertical Angle Irons <u>3 1/2 x 3 1/2</u> and their distance apart, <u>30 inches</u>				
Do. Butts from Bilge to Planksheers, worked Carvel with Butt Straps (<u>1 1/2</u> in.) thick, double or <u>single</u> Riveted; with Rivets (<u>1 1/8</u> in.) diameter, averaging (<u>3 1/2</u> ins.) from centre to centre. Breadth of laps in double Riveting (<u>5 1/2 inches</u>) Breadth of laps in single Riveting (-)					Do. Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>				
Butt Straps of Keelsons, Stringer and Tie Plates, treble or double or <u>single</u> Riveted?									
Planksheer, how secured to the plating of the sides, { Explain by Sketch, }									
Waterway " " planksheer and to the Beams, { if necessary. }									
Beams of the various Decks, how secured to the sides? <u>Beam ends turned down</u> No. of Breasthooks, <u>Five</u> Crutches, <u>Five</u>									
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.?									
Manufacturer's name or trade mark, <u>Blackburn Iron Co.; Messenden Iron Co.; and Palmers Shipbuilding and Iron Co.</u>									

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

Builder's Signature, John Reid & Co. Surveyor's Signature, James W. ...

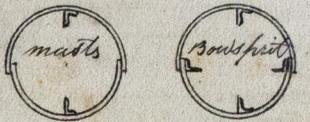
IRON 448-0437

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 lengths
 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 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

Fore Mast 80 feet 10 1/2 inches - 2 plates 7/16 Butts treble riveted. Edges double riveted. 5 x 3 x 7/16 30 inches
 Main Mast 80 feet - 2 do 7/16 " " " 5 x 3 x 7/16 30 "
 Mizzen Mast 80 feet 5 1/2 inches - 2 do 7/16 " " " 5 x 3 x 7/16 27 "
 Bowsprit 38 feet 5 inches - 2 do 7/16 " " " 5 x 3 x 7/16 29 "



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.	W'ght req'd per Rule.	Test req'd per Rule.
	SAILS.											
	CABLES, &c.	150	1 1/2	55 20 tons	1 1/2	55 20 tons	18 E. 9. 8. 71	9636	31.0.22	29.11.1.0	30.0.0	28 3/4 tons
	Chain	150	1 1/2	55 20 "	1 1/2	55 20 "	18 E. 9. 6. 71	9637	30.3.22	29.7.2.0	30.0.0	28 1/2 "
	Fore Sails,						Bowers	9638	25.2.7	25.5.3.21	25.2.0	25 1/2 "
	Fore Top Sails,						(State Machine where Tested, and name of Superintendent.)					
	Fore Topmast	75	1	18 tons	15/8	15/8	Proving House Low Walker, Newcastle upon Tyne					
	Stay Sails						Robert Barrill, Superintendent					
	Chain Cable						Admiral Iron Works, 25 Fels, Newcastle upon Tyne. Robert Kirkwood, Superintendent					
	Hawser	90	10		10		Stream	2802	10.0.14	12.2.0.21	12.0.0	
	Towlines	90	9 1/2		9 1/2				2.0.14			
	Warp	90	5 1/2		5 1/2							
	All of Good Quality.											
	Kedges											

Her Standing and Running Rigging Keen sufficient in size and Good in quality. She has One Life Long Boat and Three Others
 The present state of the Windlass is Good Capstans Good and Rudder Good Pumps Sea Iron Good

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

What arrangements are there for deadlights in snuff for bad weather? How high above deck?

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?
Six scuppers on each side, and Ports in bulwarks

Cargo Hatchways. How formed? Of Iron State size, Two each 7 feet by 6 feet 6 inches

If of extraordinary size, state how framed and secured?
 What arrangement for shifting beams? One portable beam secured by screw bolts and nuts

Hatches, themselves, whether strong and efficient? Strong and efficient Main Hatchways. State size 15 feet by 16 feet

Order for Special Survey No. 554 DATES of
 Date 18th Jan'y 1871 Surveys held
 Order for Ordinary Survey No. _____ while building
 Date _____ as per
 No. 42 in builder's yard. Section 18.

- 1st. On the several parts of the frame, when in place, and before the plating was wrought
- 2nd. On the plating during the progress of riveting
- 3rd. When the beams were in and fastened, and before the decks were laid
- 4th. When the ship was complete, and before the plating was finally coated or cemented
- 5th. After the ship was launched and equipped

General Remarks, This vessel has been built under Special Survey as per Order No. 554; and as will be seen on the other side is built far in excess of the present Rules; viz. - The Keel, Floors, Main and reverse frames, all the outside plating from the Keel to the under side of sheerstrake, hold beam stringers and deck ties to each deck. The frames are spaced 23 inches apart instead of 24 inches and every deck and hold beam had an iron pillar 3 1/2 inch diameter to hold beam, and 2 1/2 inch to upper deck beams and double riveted at head and heel all fore and aft. It will be seen by the midship section herewith appended that this vessel has a great rise of floor; the floors extending up the bilges to a perpendicular height of about seven feet. Agreeable to Rule she should require an additional stringer above the bilges in consequence of the depth of hold, but seeing the great excesses she has over and above the requirements of the Rules; and the great rise of floor (thereby shortening the length of frames) this discrepancy is more than compensated for; and I am of opinion she is worthy the most favourable consideration of the Committee for the class sought; viz. - 100 A 1.

In what manner are the surfaces preserved from oxidation? Inside Portland Cement and three coats of Outside three coats of iron paint and
Black paint on top side.

I am of opinion this Vessel should be Classed 100 A 1.

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

Travelling Expenses (if any) £ " : " : "

Special £ 59 : 19 : "

Committee's Minute 27th June 1871

Character assigned 100 A 1

Taking into consideration the great excess of this vessel has, and that her frames are all iron and closer, and her plating is a great extent thicker than required by the Rules, we submit that she would be a double angle iron stringer on the upper deck is ample compensation for the above deficiency in the hold. The Registrar