

IRON SHIP.

17205
Dec 13/11/76

No. 4333 Survey held at Glasgow Date, First Survey 16th March Last Survey 10th Nov 1876

On the "S.S. Benartie" (Brig) Master John Potter

TONNAGE under Tonnage Deck	1163.31	ONE, OR TWO DECKED, THREE DECKED VESSEL.
Ditto of Third, or Working Deck	543.53	SPAR, OR MANNING-DECKED VESSEL.
Weight of Deck, or Rudder &c. &c.		HALF BREADTH (moulded) 16.50
Ditto of Houses on Deck	17.30	DEPTH from upper part of Keel to top of Upper Deck Beams 26.87
Weight of Rudder		GIRTH of Half Midship Frame (as per Rule) .. . 38.91
Less Tonnage	1724.14	1st NUMBER 82.28
Less Crew Space	52.95	1st NUMBER, if a THREE-DECKED VESSEL - 7
Less Engine Room	1671.19	[deduct 7 feet 75.28
Register Tonnage as cut on Beam	551.72	LENGTH 288.58
	1119.47	2nd NUMBER 217.24
		PROPORTIONS—Breadths to Length 8.74
		Depths to Length—Upper Deck to Keel 10.73
		Main Deck ditto 14.70

Built at Whiteinch Glasgow
 When built 1876 Launched 19th Oct 1876
 By whom built Barclay Curle & Co.
 Owners William Thomson & Co.
 Port belonging to Leith
 Destined Voyage China & Japan via London
 Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule	288.58	BREADTH—Moulded	33.0	DEPTH top of Floors to Upper Deck Beams	24.83	Power of Engines	190	Horse.	190	Nº. of Decks with flat laid	2	Nº. of Tiers of Beams	3
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Dimensions of Ship per Register, length, 291.8 breadth, 33.25 depth, 17.3

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	10 x 2 3/4	10 x 2 3/4
STEM, moulding and thickness	10 x 2 3/4	10 x 2 3/4
STERN-POST for Rudder do. do.	10 x 5 1/2	10 x 5 1/2
for Propeller	10 x 5 1/2	10 x 5 1/2
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24
FRAMES, Angle Iron, for 2/3 length amidships	5 3 8	5 3 8
Do. for 1/3 at each end	3 3 7	3 3 7
REVERSED FRAMES, Angle Iron	3 3 7	3 3 7
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	23 2	23 2
thickness at the ends of vessel	12	11 3/4
depth at 3/4 the half-bdth. as per Rule	4 8	4 7
height extended at the Bilges	7	7
BEAMS, Upper, Main, or Middle Deck	2 1/2 2 1/2	2 1/2 2 1/2
Single or double Angle Iron on Upper edge	4 8	4 8
Average space	8	8
BEAMS, Main, or Middle Deck	3 3 6	3 3 6
Single or double Angle Iron on Upper Edge	4 8	4 8
Average space	8	8
BEAMS, Lower Deck, Hold, or Orlop	3 3 6	3 3 6
Single or double Angle Iron on Upper Edge	4 8	4 8
Average space	8	8
KEELSONS Centre line, single or double plate	19	13
Rider Plate	13	13
Angle Irons	6 4 9	6 4 9
Double Angle Iron Keelson	6 4 9	6 4 9
Side Intercostal Plate	6 4 9	6 4 9
do. Angle Irons	6 4 9	6 4 9
Attached to outside plating with angle iron	3 1/2 3 1/2	3 1/2 3 1/2
BILGE Angle Irons	8 4 8	8 4 8
do. Bulb Iron	8	8
do. Intercostal plates riveted to plating	6 4 9	6 4 9
BILGE STRINGER Angle Irons	6 4 9	6 4 9
Intercostal plates riveted to plating for 1/2 length	9	9
do. Angle Irons	9	9

PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges & working at Bilge, or in case of deck, etc., and length applied

fin up. part of Bilge to lr. edge of Sh'rstrake

Main Sheerstrake, breadth and thickness of plating at Sh'rstrake, & length applied from M.L. to Cap. & Spar Str. Sh'rstrake. Up. or Spar Str. Strakes, etc. & thickness

Butt Straps to outside plating, breadth & thickness

Lengths of Plating

Shifts of Plating, and Stringers

Gunwale Plate on ends of working, Spar, or Upper Deck Beams, breadth and thickness

Angle Iron on ditto

Tie Plates fore and aft, outside Hatchways

Diagonal Tie Plates on Beams No. of Pairs

Waterways do. do.

Flat of Upper Deck do. do.

How fastened to Beams

Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness

Is the Stringer Plate attached to the outside plating?

Angle Irons on ditto, No. 2

Tie Plates, outside Hatchways

Diagonal Tie Plates on Beams, No. of pairs

Flat of Middle Deck do. do.

How fastened to Beams

Stringer Plates on ends of Lower Deck, Hold or Orlop Beams

Is the Stringer Plate attached to the outside plating?

Angle Irons on ditto, No. 2

Stringer or Tie Plates, outside Hatchways

Flat of Lower Deck

Ceiling betwixt Decks, thickness and material in hold

do. P. Pin do.

Main piece of Rudder, diameter at head

do. at heel

Can the Rudder be unshipped afloat?

Bulkheads No. 5 Thickness of

Height up

How secured to sides of ship

Size of Vertical Angle Irons

Are the outside Plates doubled two spaces of Frames in length?

Transoms, material. Knight-heads. Hawse Timbers. Plat. & Lion

Windlass Rapiers Patent Pall Bitt not required

The FRAMES extend in one length from Keel to gunwale Riveted through plates with 7/8 in. Rivets, about 7 apart.

The REVERSED ANGLE IRONS on floors and frames extend from middle line to Main deck and to Upper deck 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 1 1/8 in. diameter, averaging 5 1/2 ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 in. diameter, averaging 3 3/4 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 1 1/8 in. diameter averaging 3 3/4 ins. from centre to centre.

Butts of 3 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 7/16 thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 7/8 in. diameter, averaging 3 3/4 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 1 1/8 in. diameter, averaging 3 3/4 ins. from cr. to cr.

Edge of Main Sheerstrake, double or single riveted.

Butts of Main Sheerstrake, treble riveted for 1/2 length amidships.

Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 1/2 length.

Breadth of laps of plating in double riveting 5 1/2 Breadth of laps of plating in single riveting

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

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

Beams of the various Decks, how secured to the sides? Trans. lashed to Beams. No. of Breasthooks, Crutches,

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

Manufacturer's name or trade mark,

The above is a correct description.

Builder's Signature, Barclay Curle & Co. Surveyor's Signature, J. Lawrence

Surveyor to Lloyd's Register of British and Foreign Shipping.

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*
 Are the fillings between the ribs and plates solid single pieces? *Yes*
 Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? *Yes*
 Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? *Yes*
 Do any rivets break into or through the seams or butts of the plating? *In corners of butts only*

17205 *JW*

Masts, Bowsprit, Yards, &c., are *New* 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
Fore Mast 81' 9" x 23" ^{6.65}/₁₆ True plates in the round edge double butts
Main Mast 83' 0" x 23" ^{6.65}/₁₆ true riveted Plates hot & cold tilted

Big Rigged

NUMBER for EQUIPMENT	Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.	N°.	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
<i>23744</i>	<i>27 1/2</i>	<i>1 3/4</i>	<i>77 125</i>	<i>270-1 3/4</i>	<i>55 1/8</i>	Bowers	<i>3</i>	<i>31.2.10</i>	<i>29.15.3.21</i>	<i>30.0.0</i>	<i>28.12.0.0</i>
<i>One</i>	<i>Glasgow 17</i>	<i>William Frasier</i>	<i>418 Oct 1876</i>	<i>1876</i>	<i>77 1/8</i>		<i>3</i>	<i>30.0.4</i>	<i>28.13.1.21</i>	<i>30.0.0</i>	<i>28.12.0.0</i>
<i>Suit</i>	<i>60</i>	<i>1 1/4</i>	<i>90 11</i>	<i>90 11</i>	<i>90 11</i>	Stream	<i>1</i>	<i>12.1.11</i>	<i>12.0.0</i>	<i>12.0.0</i>	<i>12.0.0</i>
	<i>90</i>	<i>1 1/2</i>	<i>90 11</i>	<i>90 11</i>	<i>90 11</i>	Kedges	<i>2</i>	<i>6.1.20</i>	<i>6.0.0</i>	<i>6.0.0</i>	<i>6.0.0</i>
	<i>90</i>	<i>1 1/2</i>	<i>90 7</i>	<i>90 7</i>	<i>90 7</i>		<i>2</i>	<i>3.0.26</i>	<i>3.0.0</i>	<i>3.0.0</i>	<i>3.0.0</i>

Standing and Running Rigging *First hump* sufficient in size and *Good* in quality. She has *3 Sails* *Large* Boat and *9* Others
 The Windlass is *Swain's Patent* Capstan *14 Steam* and Rudder *Good* Pumps *One 5" hand pump in each hold*

Engine Room Skylights.—How constructed? *Of Teak on Iron Frames* How secured in ordinary weather? *Belts*
 What arrangements for deadlights in bad weather? *6" 2" above deck*

Coal Bunker Openings.—How constructed? *Cast Iron* How are lids secured? *Self locking* Height above deck? *12" inches*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Open stails, no bulwarks*

Cargo Hatchways.—How formed? *Iron Cornices*
 State size Main Hatch *19' 4" x 10' 9"* Forehatch *11' 5" x 10' 0"* Quarterhatch *11' 4" x 9' 8"*

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

What arrangement for shifting beams? *Weld plate in main hatchway*

Hatches, if strong and efficient? *Yes (Teak)*

Order for Special Survey No.	Date	1st.	2nd.	3rd.	4th.	5th.
<i>1193</i>	<i>6th March 76</i>	On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the process of riveting	When the beams were in and fastened, and before the decks were laid...	When the ship was complete, and before the plating was finally coated or cemented..	After the ship was launched and equipped
<i>269</i>	<i>in builder's yard</i>	<i>March 14. 22. 25</i>	<i>April 3. 7. 18. 25</i>	<i>May 1. 5</i>	<i>15. 16. 23. June 1. 6. 16. 27. July 5. 24. 25</i>	<i>August 7. 10. 16. 21. 25. 30. 31. September 5. 7</i>
		<i>11. 19. 24</i>	<i>October 4. 11. 19. 20. 27. 29</i>	<i>November 3. 8. 10. 15. 16.</i>		

General Remarks (State quality of workmanship, &c.)
The workmanship is very good. She is constructed in accordance with the approved British Section. The arrangements of beams, stringers & web frames in engine & boiler space are as approved by the Committee.

Monkey Forecastle 22' 6" Deck House 16' 2" x Breadth of web with passage through on each side 3' 10" wide. House aft 12' 8" x 8' 9"

State if one, two, or three, decked vessel, or if spar, or canvas decked; and the lengths of poop, fore-castle, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside *Cement + Paint* Outside *Paint*

I am of opinion this Vessel should be Classed ** 100A Three Decked*

The amount of the Entry Fee ... £ *5* : : : is received by me, *J. Lawrence*
 Special ... £ *67* : *13* : *6* *1876*
 Certificate ... *British*

Committee's Minute *14th November 1876*

Character assigned *100A*
Lloyds *2 Dks* *3 1/2 Bns* *J. Lawrence*

