

STEEL IRON SHIP.

No. 405 Survey held at *Port Glasgow* Date, First Survey *24th April 1882* Last Survey *24th April 1882*

On the *Crew Steamer Bonnington*

TONNAGE under Tonnage Dept. <i>1999.12</i>	ONE OR TWO DECKED, THREE DECKED VESSEL.	Master <i>F. L. Buntill</i>
Ditto of <i>11.85</i>	SPAR, OR AWNING DECKED VESSEL.	Built at <i>Port Glasgow</i>
Ditto of <i>39.11</i>	Half Breadth (moulded) <i>19.0</i>	When built <i>1882-83</i> Launched <i>16th March</i>
Ditto of <i>30.61</i>	Depth from upper part of Keel to top of Upper Deck Beams <i>26.5</i>	By whom built <i>Robert Duncan & Co</i>
Ditto of <i>44.63</i>	Girth of Half Midship Frame (as per Rule) <i>42.0</i>	Owners <i>James Rennie & Co</i>
Ditto of Forecastle <i>2125.30</i>	1st Number <i>87.5</i>	Residence <i>Glasgow</i>
Gross Tonnage <i>59.97</i>	1st Number, if a 3-Decked Vessel deduct 7 feet <i>7</i>	Port belonging to <i>Glasgow</i>
Less Crew Space <i>2065.33</i>	Length <i>288.5</i>	Destined Voyage <i>Buenos Ayres</i>
Less Engine Room <i>680.10</i>	2nd Number <i>23224.0</i>	If Surveyed while Building, Afloat, or in Dry Dock.
Register Tonnage as cut on Beam <i>1385.23</i>	Proportions—Breadths to Length <i>7.59</i>	<i>While Building & Afloat.</i>
	Depths to Length—Upper Deck to Keel <i>10.88</i>	
	Main Deck ditto <i>15.18</i>	

LENGTH on deck as per Rule	Feet. Inches.	BREADTH—Moulded	Feet. Inches.	DEPTH top of Floors to Upper Deck Beams	Feet. Inches.	Power of Engines	Horsepower	No. of Decks with flat laid	No. of Tiers of Beams
<i>286</i>		<i>38 0</i>		<i>16 11 1/2</i>		<i>200</i>		<i>2</i>	<i>2</i>

Dimensions of Ship per Register, length, *289.25* breadth, *38.2* depth, *33.1*

KEEL, depth and thickness	Inches in Ship	Inches per Rule	PLATES in Garboard Strakes, br'dth & thickness	Inches in Ship	Inches per Rule
<i>2x10x1/8</i>	<i>10 x 1/8</i>	<i>10 x 1/8</i>	<i>40 19 40 19</i>		
STEM, moulding and thickness	<i>10 x 2 1/4</i>	<i>10 x 2 1/4</i>	From Garboard to upper part of Bilges	<i>17 17</i>	<i>17 17</i>
TERN-POST for Rudder do. do.	<i>10 x 5 1/2</i>	<i>10 x 5 1/2</i>	Of d'bling at Bilge, or increased thickness, and length applied	<i>18 18</i>	<i>18 18</i>
" for Propeller	<i>10 x 5 1/2</i>	<i>10 x 5 1/2</i>	From up. prt of Bilge to l.r. edge of Sh'rstrake	<i>18 18</i>	<i>18 18</i>
Distance of Frames from moulding edge to moulding edge, all fore and aft	<i>24</i>	<i>24</i>	Main Sheerstrake, breadth and thickness	<i>18 18</i>	<i>18 18</i>
FRAMES, Angle Iron, for 1/2 length amidships	<i>5 3 1/2 13</i>	<i>5 3 1/2 13</i>	Of d'bling at Sh'stk. & lng. applied	<i>18 18</i>	<i>18 18</i>
Do. for 1/2 at each end	<i>5 3 1/2 11</i>	<i>5 3 1/2 11</i>	From M'n. to Up. or Spar Dk. Sh'rstrake	<i>18 18</i>	<i>18 18</i>
REVERSED FRAMES, Angle Iron	<i>3 1/2 3 1/2 13</i>	<i>3 1/2 3 1/2 13</i>	Up. or Spar Dk Sh'rstrake, br'dth & thickn'ss	<i>40 24 40 24</i>	<i>40 24 40 24</i>
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	<i>as shown on app</i>	<i>as shown on app</i>	Butt Straps to outside plating, breadth & thickness	<i>14 18 20 22</i>	<i>14 18 20 22</i>
Thickness at the ends of vessel	<i>as shown on app</i>	<i>as shown on app</i>	Lengths of Plating	<i>12 3 1/4 do</i>	<i>12 3 1/4 do</i>
Depth at 1/2 the half-b'ath. as per Rule	<i>as shown on app</i>	<i>as shown on app</i>	Shifts of Plating, and Stringers	<i>40 1/2 14</i>	<i>40 1/2 14</i>
Height extended at the Bilges	<i>as shown on app</i>	<i>as shown on app</i>	Gunwale Plate on ends of <i>Awning, Spar, or</i>	<i>40 1/2 14</i>	<i>40 1/2 14</i>
BEAMS, Upper, Spar, or Awning Deck	<i>6 3 15 6 3 15</i>	<i>6 3 15 6 3 15</i>	Upper Deck Beams, breadth and thickness	<i>40 1/2 14</i>	<i>40 1/2 14</i>
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>9 14 9 14</i>	<i>9 14 9 14</i>	Angle Iron on ditto	<i>4 x 4 x 1/4</i>	<i>4 x 4 x 1/4</i>
Single or double Angle Iron on Upper edge	<i>24 24</i>	<i>24 24</i>	Tie Plates fore and aft, outside Hatchways	<i>10 10</i>	<i>10 10</i>
Average space	<i>24 24</i>	<i>24 24</i>	Diagonal Tie Plates on Beams No. of Pairs	<i>10 10</i>	<i>10 10</i>
BEAMS, Main, or Middle Deck	<i>6 3 15 6 3 15</i>	<i>6 3 15 6 3 15</i>	Flat of Up., Spar, or Awning Dk.	<i>10 10</i>	<i>10 10</i>
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>9 14 9 14</i>	<i>9 14 9 14</i>	How fastened to Beams	<i>10 10</i>	<i>10 10</i>
Single or double Angle Iron on Upper edge	<i>24 24</i>	<i>24 24</i>	Stringer Plate on ends of Main or Middle Deck	<i>42 16 42 16</i>	<i>42 16 42 16</i>
Average space	<i>24 24</i>	<i>24 24</i>	Beams, breadth and thickness	<i>42 16 42 16</i>	<i>42 16 42 16</i>
BEAMS, Lower Deck	<i>10 17 10 17</i>	<i>10 17 10 17</i>	Is the Stringer Plate attached to the outside plating?	<i>Yes</i>	<i>Yes</i>
Angle or d'ble Ang. Iron, Plate or Tee Bulb Iron	<i>4 4 14 4 4 14</i>	<i>4 4 14 4 4 14</i>	Angle Irons on ditto, No. 2	<i>4 x 4 x 1/4</i>	<i>4 x 4 x 1/4</i>
Single or double Angle Iron on Upper edge	<i>4 4 14 4 4 14</i>	<i>4 4 14 4 4 14</i>	Tie Plates, outside Hatchways	<i>10 10</i>	<i>10 10</i>
Average space	<i>4 4 14 4 4 14</i>	<i>4 4 14 4 4 14</i>	Diagonal Tie Plates on Beams, No. of pairs	<i>10 10</i>	<i>10 10</i>
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	<i>49 16 49 16</i>	<i>49 16 49 16</i>	Flat of Middle Deck do. do.	<i>10 10</i>	<i>10 10</i>
" Rider Plate	<i>49 16 49 16</i>	<i>49 16 49 16</i>	How fastened to Beams	<i>10 10</i>	<i>10 10</i>
" Bulb Plate to Intercoastal Keelson	<i>49 16 49 16</i>	<i>49 16 49 16</i>	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	<i>39 14 39 14</i>	<i>39 14 39 14</i>
" Angle Irons	<i>49 16 49 16</i>	<i>49 16 49 16</i>	Is the Stringer Plate attached to the outside plating?	<i>Yes</i>	<i>Yes</i>
" Double Angle Iron Side Keelson	<i>49 16 49 16</i>	<i>49 16 49 16</i>	Angle Irons on ditto, No. 4	<i>4 x 4 x 1/4</i>	<i>4 x 4 x 1/4</i>
" Side Intercoastal Plate	<i>49 16 49 16</i>	<i>49 16 49 16</i>	Stringer or Tie Plates, outside Hatchways	<i>7 1/2 11 7 1/2 11</i>	<i>7 1/2 11 7 1/2 11</i>
" do. Angle Irons	<i>49 16 49 16</i>	<i>49 16 49 16</i>	Flat of Lower Deck	<i>7 1/2 11 7 1/2 11</i>	<i>7 1/2 11 7 1/2 11</i>
" Attached to outside plating with angle iron	<i>49 16 49 16</i>	<i>49 16 49 16</i>			
BILGE Angle Irons	<i>6 4 14 6 4 14</i>	<i>6 4 14 6 4 14</i>	Ceiling betwixt Decks, thickness and material	<i>2 2</i>	<i>2 2</i>
" do. Bulb Iron	<i>6 4 14 6 4 14</i>	<i>6 4 14 6 4 14</i>	" in hold do. do. P. 1/2	<i>2 2</i>	<i>2 2</i>
" do. Intercoastal plates riveted to plating for length	<i>6 4 14 6 4 14</i>	<i>6 4 14 6 4 14</i>	Main piece of Rudder, diameter at head	<i>7 1/2 7 1/2</i>	<i>7 1/2 7 1/2</i>
BILGE STRINGER Angle Irons	<i>6 4 14 6 4 14</i>	<i>6 4 14 6 4 14</i>	do. at heel	<i>7 1/2 7 1/2</i>	<i>7 1/2 7 1/2</i>
Intercoastal plates riveted to plating for length	<i>6 4 14 6 4 14</i>	<i>6 4 14 6 4 14</i>	Can the Rudder be unshipped afloat?	<i>Yes</i>	<i>Yes</i>
SIDE STRINGER Angle Irons	<i>6 4 14 6 4 14</i>	<i>6 4 14 6 4 14</i>	Bulkheads No. <i>Five</i> No. per Rule <i>Five</i>	<i>10 10 10 10</i>	<i>10 10 10 10</i>

The FRAMES extend in one length from *Side to side of Tank and above to main* Riveted through plates with *7/8* in. Rivets, about *1/2* in. apart.

The REVERSED ANGLE IRONS on floors and frames extend *from middle line to up. 2nd in. E. of space, before riveting to the tank* 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 *1/8* 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 1/2* ins. from centre to centre.

" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 1/2* ins. from centre to centre.

" Butts of *three* Strakes at Bilge for *half* length, treble riveted with Butt Straps *1/16* 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 1/4* ins. from cr. to cr.

" Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 1/2* ins. from cr. to cr.

" Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.

" Butts of Main Sheerstrake, treble riveted for *half* length amidships. Butts of Upper or Spar Sheerstrake, treble riveted *half* length amidships.

" Butts of Main Stringer Plate, treble riveted for *half* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *half* length.

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

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Double* No. of Breasthooks, *Five* Crutches, *Three*

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

Manufacturer's name or trade mark *Steel Plates and angles made at Woodland Works Glasgow* Manufactured in *Scotland*

The above is a correct description of the ship

Builder's Signature, *Robert Duncan & Co* Surveyor's Signature, *James Rennie & Co*

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?

Yes a few

Masts, Bowsprit, Yards, &c., are *Steel* 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

Lower Mast proper 85' 10" 26 x 5 1/2 19 x 7 1/2 18 x 7 1/2
Fore Mast proper 44' 0" 24 x 5 1/2 18 x 7 1/2 17 x 7 1/2
Mizzen 77' 0" 20 x 7 1/2 17 x 7 1/2 13 x 7 1/2
Formed with 3 plates on the round. Edges double riveted. Butts held double with 1/4" straps increased 1/16. Doubled at leading.

NUMBER for EQUIPMENT

27768

SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Supdt.	ANCHORS.	N ^o .	Weight.	Test per Certificate.	Wt. req'd per Rule.	Machine where Tested & Supdt.
N ^o .	Chain	135	1 1/2	63 1/2 88 1/2	370	1/2 1/2 1/2 1/2	Bower Anchors	7216	34.2.12	32.1.3.0	54.2.0	1/2 1/2 1/2 1/2
Fore Sails,	Iron Stream Chain	135	1 1/2		1 1/2	1/2 1/2 1/2 1/2		7217	34.0.8	31.11.0.0		
Fore Top Sails,	or Steel Wire	100	4 1/2	42 1/2 112 1/2	35	1/2 1/2 1/2 1/2		7218	29.0.0	27.17.2.0		
Fore Topmast Stay Sails,	or Hempen Strm Cable	90	3 1/2	36		1/2 1/2 1/2 1/2		Total	97.2.20		97.0.0	
Main Sails,	Towline, Hemp.	90	8		100	1/2 1/2 1/2 1/2	Stream Anchor	7219	10.1.14	12.5.1.0	10.3.0	
Main Top Sails,	or Steel Wire	350	6		90	1/2 1/2 1/2 1/2	Kedge	7220	5.2.8	7.17.3.0	5.3.0	
and other	Hawser				90	1/2 1/2 1/2 1/2	2nd Kedge	7221	2.2.10	5.3.0.0	2.2.0	
	Warp											
	quality											

Standing and Running Rigging *1/2" Wire & Manila*, sufficient in size and *good* in quality. She has *2* *Long* Boat and *1* *big* *1* *small*.

The Windlass is *Iron Patent* Capstan *1* and Rudder *Good* Pumps *Good*

Engine Room Skylights.—How constructed? *Coining plates 24 above 35* How secured in ordinary weather? *By screw bolts*

What arrangements for deadlights in bad weather? *Seal covers and hulls eyes*

Coal Bunker Openings.—How constructed? *Coining plates 4 1/2* How are lids secured? *Cross bar* Height above deck? *12"*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *5 Scuppers and 1 port on each side - also bulwarks open before and abaft main house*

Cargo Hatchways.—How formed? *Coining plates 3/16 thick - 30" above deck*

State size *Main Hatch 24' x 14'* Fore hatch *10' x 10'* Quarter hatch *20' x 12' and 10' x 10'*

If of extraordinary size, state how framed and secured? *A deep web plate and 3 fore and after in large after hatchway - 2 inch*

What arrangement for shifting beams? *Plates in main and 3 fore and after*

Hatches, If strong and efficient? *Yes. Solid 3 1/4 thick*

Order for Special Survey No. <i>1887</i>	1st. On the several parts of the frame, when in place, and before the plating was wrought	<i>Specially surveyed 1882:—May 2.15.22.30;</i>
Date <i>29th Dec 87</i>	2nd. On the plating during the process of riveting	<i>June 5.7.9.19. July 14.21.27; August 14.18.22.30.31;</i>
Order for Ordinary Survey No. <i>1888</i>	3rd. When the beams were in and fastened, and before the decks were laid....	<i>Sept. 7.11.21; Oct. 4.6.10.17.20.24.27; Nov. 6.10.13.20.30. Dec 6.</i>
Date <i>1888</i>	4th. When the ship was complete, and before the plating was finally coated or cemented..	<i>1887 Jan'y 11.15; Feb'y. 5. 20. 26; March. 5. 9. 28; April 24.</i>
No. <i>1884</i> in builder's yard.	5th. After the ship was launched and equipped	

General Remarks (State quality of workmanship, &c.)

Quality of Workmanship & materials good. She is a sister vessel to the "Newcomen" freemock report 8391 and has been constructed in accordance with the accompanying approved sketches of buildship showing sections, with the Secretary's letters relating to this case, with the Committee's Circulars & in all other respects with the Rules.

The double bottom has been tested for watertightness as required by the Rules & made quite satisfactory.

State if one, two, or three decked vessel, or if span, or running decked; and the lengths of poop, bridge, forecabin, or raised quarter deck. (If double bottom, state particulars on separate form.)

How are the surfaces preserved from oxidation? Inside *Paint and cement* Outside *Paint and composition*

I am of opinion this Vessel should be Classed **100 A 1 "Steel"*

The amount of the Entry Fee ... £ *5* : : : is received by me, *J. D. Davis*

Special ... £ *76:12:6* 27th Apr 1883

Certificate ... *Gratis*

(to be sent as per margin).

(Travelling Expenses, if any, £ *1:4:0*.)

Committee's Minute

Character assigned

TRW 100 A 1 Steel

24 x 10 1/2 19 x 7 1/2 18 x 7 1/2

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

Lloyd's Register Foundation