

IRON SHIPS.

No. 5878 Survey held at Port Glasgow

Date 6th December

1879

on the Barge "Loch Urr"

Master Edgar

Tonnage under tonnage deck 896.42

Ditto of quarter deck Break 16.69

Ditto of poop, forecabin, or other erections on upper deck 18.29

Ditto of spar deck

Ditto of engine room

Gross tonnage, 731.40

Net tonnage, 515.88

Dead weight tonnage, 715.22

Built at Port Glasgow

When built 1870

Launched 5th Nov 1870

By whom built McCulloch, Patterson & Co

Owners D. J. Sprunt

Port belonging to Liverpool

Destined Voyage Glyde to Melbourne

If Surveyed while Building, Afloat, or in Dry Dock While Building

| Length aloft | Feet. | Inches. | Extreme Breadth | Feet. | Inches. | Depth from top of Upper Deck Beam to top of Floor | Feet. | Inches. | Power of Engines | Horse. | No. of Decks |
|---------------|-------|---------|-----------------|-------|---------|---|-------|---------|------------------|--------|--------------------|
| <u>88 1/2</u> | | | <u>30 1/2</u> | | | <u>18 1/2</u> | | | | | <u>One, Second</u> |

(Dimensions of Ship per Register, Length 88 1/2 breadth 30.1 depth 18.6)

| Keel, if bar iron, depth and thickness | Inches in Ship. | Inches required per Rule. | Plates in Garboard Strakes, breadth and thickness | Inches in Ship. | Inches required per Rule. |
|--|------------------|---------------------------|---|--|---------------------------|
| <u>7 x 2 3/4</u> | <u>7 x 2 3/4</u> | <u>7 x 2 3/4</u> | <u>30</u> | <u>46</u> | <u>30</u> |
| Stem, if bar iron, moulding and thickness | <u>7 x 2 3/4</u> | <u>7 x 2 3/4</u> | Ditto from Garboard to upper part of Bilges.. | <u>46</u> | <u>46</u> |
| Stern-post, if bar iron, moulding and thickness | <u>7 x 2 3/4</u> | <u>7 x 2 3/4</u> | from upper part of Bilge to a perpendicular height from upper side of Keel of <u>3/4</u> ths the entire depth of Hold | <u>46</u> | <u>46</u> |
| Distance of Frames from moulding edge to moulding edge, all fore and aft | <u>21</u> | <u>21</u> | from <u>3/4</u> ths depth of Hold to lower edge of Sheerstrake | <u>46</u> | <u>46</u> |
| Size of Angle Iron, single or double | <u>4</u> | <u>3</u> | Sheerstrake, breadth and thickness | <u>30</u> | <u>46</u> |
| Reversed Iron, if to every frame | <u>3</u> | <u>2 3/4</u> | Butt Straps to outside plating, breadth and thickness | <u>10</u> | <u>9</u> |
| and on every alternate frame | <u>3</u> | <u>2 3/4</u> | Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness | <u>36</u> | <u>46</u> |
| Depth and thickness of Floor Plate at mid line | <u>26</u> | <u>46</u> | Angle Iron on ditto | <u>4 1/2 x 3 1/2</u> | <u>4 1/2 x 3 1/2</u> |
| Ditto ditto at Bilge Keelson | <u>12</u> | <u>46</u> | Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways | <u>11 1/2</u> | <u>46</u> |
| Size of Reversed Angle Iron, and No. Single at top of Floor Plate | <u>3</u> | <u>2 3/4</u> | Diagonal Tie Plates on ditto | <u>10 1/2</u> | <u>46</u> |
| Planks, Deck (No. <u>double</u>) | <u>7</u> | <u>5</u> | Planksheer, materials and scantlings | | |
| Plate, Tee, or Bulb Iron | <u>7</u> | <u>5</u> | Waterway ditto ditto | | |
| double or single Angle Iron, on edge | <u>42 inches</u> | <u>42 inches</u> | Flat of Upper Deck, thickness and material | <u>3 1/2</u> | <u>3 1/2</u> |
| average space between | <u>42 inches</u> | <u>42 inches</u> | how fastened to Beams | <u>By Galvanized Iron bolts & nuts</u> | |
| Hold, or Lower Deck (No. <u>double</u>) | <u>7</u> | <u>5</u> | Ceiling betwixt Decks and in Hold, thickness and material | <u>2 1/2</u> | <u>American Red Pine</u> |
| double Angle, Tee, Plate, or Bulb Iron, on edge | <u>42 inches</u> | <u>42 inches</u> | Clamps or Spirketting ditto | | |
| average space between | <u>42 inches</u> | <u>42 inches</u> | Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness | <u>23</u> | <u>46</u> |
| Engine <u>blowing on floors</u> | <u>13 1/4</u> | <u>46</u> | Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams | <u>4 1/2 x 3 1/2</u> | <u>4 1/2 x 3 1/2</u> |
| single or double plate, box, or intercostal | <u>6 1/2</u> | <u>46</u> | Stringers in Hold | <u>4 1/2 x 3 1/2</u> | <u>4 1/2 x 3 1/2</u> |
| Size of Plates <u>foundation plate</u> | <u>14</u> | <u>46</u> | Flat of Lower Deck, thickness and material | <u>3</u> | <u>5 inches</u> |
| Size of Angle Irons <u>base</u> | <u>4</u> | <u>3</u> | Main piece of Rudder, diameter at head | <u>5</u> | <u>3</u> |
| single or double plate, box, or intercostal | <u>4</u> | <u>3</u> | " " " at heel | <u>3</u> | <u>3</u> |
| (No. <u>one</u>) at each Bilge | <u>4 1/2</u> | <u>3 1/2</u> | (Can the Rudder be unshipped afloat) <u>Yes</u> | | |
| single, or double, plate, or box | <u>4 1/2</u> | <u>3 1/2</u> | Bulkheads, No. <u>One</u> Thickness of | <u>46</u> | <u>46</u> |

Frames, material Iron or, if none, in what manner compensated for.

Bulkheads, and Hawse Timbers Iron

Frames extend in one length from Keel to gunwale

Reverse angle irons on the floors extend in one length across the middle line from upper part of Hold to Beam stringer

" " and on the frames " " from Beam stringer to Beard stringer

Keelson, how are the various lengths of plates or angle irons connected? By plates and Angle Iron butt straps

Plates, Garboard, double or rivetted to keel, double or at upper edge, with rivets (1 1/2 ins.) diameter, averaging (4 1/2 ins.) apart.

" Edges from Garboards to upper part of bilge, worked clench, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.

" Butts from Keel to turn of bilge, worked carvel with butt straps (1/2 + 1/2) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.

Do the butt straps lap over and rivet through the lands of the strake below? No

" Edges from bilge to sheerstrake, worked carvel with a lining piece () thick, or clench, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.

Do the butt straps lap over and rivet through the lands of the strake below? No

" Edges of Sheerstrake, double or single rivetted? At upper edge single at bulwarks and at lower edge double

" Butts from bilge to planksheers, worked carvel with butt straps (7/8 + 7/8) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.

Breadth of laps in double rivetting (5 inches) Breadth of laps in single rivetting (not any)

Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? All double Chain rivetted

Planksheer, how secured to the plating of the sides Explain by sketch

Waterway " " planksheer and to the Beams if necessary.

Deck Beams, how secured to the side? Beam ends turned down

Hold or Lower Deck ditto Beam ends turned down

Paddle " " No. of breasthooks Four crutches Four

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

Manufacturer's name or trade mark Blackburn Iron Co

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

Builder's Signature McCulloch, Patterson & Co Surveyor's Signature Saml Laphorn

IRON 447-0317

Workmanship. Are the lands or laps of the clenchwork in all cases in breadth at least five and a half times the diameter of the rivets in double rivetted edges and butts, and at least three and a quarter times the diameter of the rivets where single rivetting is admitted? Yes

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

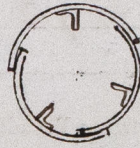
Do the holes for rivetting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the outer plate? Yes

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. (X) 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 rivetting, quality of Materials, and if stamped with Maker's name.

Masts &c. Thickness of Plates. Rivetting of Butts, Rivetting of Edges, Angle Irons &c. Dimensions

| | Double | Single | 3x3x6 | 3 | 23 |
|------------|-------------------|--------|-------|---|----|
| Foremast | 66 | " | 3x3x6 | 3 | 23 |
| Main Mast | 66 | " | 3x3x6 | 3 | 22 |
| Bowsprit | 66 | " | 3x3x6 | 3 | 18 |
| Mizen Mast | American Red Pine | | | | |



| No. | She has SAILS. | CABLES, &c. | Fathoms. | Inches. | Test as per Certificate. | In. req'd per Rule. | Test req'd per Rule. | ANCHORS, &c. | No. | Weight. | Test as per Certificate. | Wt req'd per Rule. | Test req'd per Rule. |
|-----|--------------------------------------|--------------------------------|----------|---------|--------------------------|---------------------|----------------------|--------------|------|---------|--------------------------|--------------------|----------------------|
| | Fore Sails, | Chain | 300 | 1 1/2 | 14 tons | 380.196 | 44 tons | Bowers | 4661 | 23.2.14 | 23.11.3.14 | 26.2.0 | 23.2.0 |
| | Fore Top Sails, | Chain | 80 | 1 1/2 | 18 tons | | | | 4662 | 23.3.14 | 23.15.2.14 | 23.2.0 | 23.2.0 |
| | Fore Topmast Stay Sails | Chain | 80 | 1 1/2 | 18 tons | | | | 4663 | 20.1.9 | 21.1.2.7 | 19.8.25 | 20.1.9 |
| | Main Sails, | Hawser | 90 | 10 | 10 | | | | | | | | |
| | Main Top Sails, | Towlines | 90 | 8 | 8 | | | | | | | | |
| | | Warp | 90 | 6 | 5 | | | | | | | | |
| | | All of | 90 | 5 | | | | | | | | | |
| | and | | | | | | | | | | | | |
| | Her Standing and Running Rigging | Hemp | | | | | | | | | | | |
| | She has | One Long Boat and Three others | | | | | | | | | | | |
| | The present state of the Windlass is | Good | | | | | | | | | | | |
| | | Capstans | Good | | | | | | | | | | |
| | | Rudder | Good | | | | | | | | | | |
| | | Pumps | Good | | | | | | | | | | |
| | | Lead | Good | | | | | | | | | | |

Order for Special Survey No. 542 Date 4th July 1870
 Order for Ordinary Survey No. 542 Date 4th July 1870
 Order for Ordinary Survey No. 542 Date 4th July 1870

DATES of Surveys held while building as per 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 rivetting

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

5th. After the ship was launched

Specially surveyed while building from July 1. Dec. 1870 in all 16 visits

State if she has a Spar Deck _____ Poop _____ or Forecastle _____

General Remarks, This vessel has been built under special survey as per Order No. 542. Is Barque rigged, and has a raised quarter deck, and monkey forecabin with a house on deck for part of the crew, and is a sister ship to the "Lock Dec" Greenock Report No. 5735.

This vessel is built agreeable to Table B for the *A1 Grade, but the Owners are now desirous to have her classed 100 A1.

Half moulded breadth 15. -

Depth from upper part of keel to top of upper deck beam 21. -

Birth of half midship frame 31.3

1st Number 67.3

Length 187.2

13.4.6

4.7.1

53.8.4

67.3

12,598.58

On comparing her scantlings with the Rules on the Numerical principle we find them as follows:

1st The greater portion of the outside plating 1/8 thicker than required by the Rule.

2nd The frames are placed closer than required, and are the same size all fore and aft.

3rd The reverse frames are slightly less than required being 3x2 1/2 x 6 instead of 3x3 x 6 required by Rule.

4th The stringers on beam ends are broader than required.

5th The floors are slightly thinner, but they are deeper than required; also she has a larger middle line keelson, and a foundation plate, more than the Rules require, as well as an extra side keelson as shown on sketch herewith for ninety feet amidships.

6th The principal deviation from the new Rules is that the stringer plates on the hold beam ends are not connected to the outside plating as required by Rule, consequently the slight deficiencies from the new Rules are in our opinion fully compensated for in the excesses, and is worthy the favourable consideration of the Committee for the 100 A1 Grade.

In what manner are the surfaces preserved from oxidation? Inside Cemented in place three coats oxide of iron paint

Ditto ditto Outside Three coats oxide of iron. Oriental anti-rusting composition on bottom, and black paint on top sides

We are of opinion this Vessel should be Classed *A1 or 100 A1 as the Committee may deem fit for the reasons set forth above.

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

Dec 1st Special £ 35 : 16 : "

X Certificate (A required) £ : : : "

Committee's Minute 9th Dec 1870

Character assigned 100 A1

Having compared requirements of the new Rules with this case, I beg to concur in the opinion given above by the resident Surveyors, under whose supervision the vessel was built, also to recommend that she be classed by Committee 100 A1, as required by Rules.

Dec 7/70