

# STEEL IRON SHIP.

RECEIVED 30th NOV. 82. 5917

No. **5914** Survey held at **Dumbarton** Date, First Survey **23rd Nov 1882** Last Survey **21st Nov 1882**  
 On the **S.S. "Carawera"** 2 masts, Schooner rigged

|  |  |  |
|--|--|--|
| <p><b>TONNAGE</b> under Tonnage Deck } <b>1728.52</b></p> <p>Ditto of Third, Spar, or Awning Deck } <b>149.90</b></p> <p>Ditto of Poop, <del>or</del> <sup>Painted Q. Dk.</sup> } <b>79.05</b></p> <p>Ditto of Houses on Deck } <b>45.68</b></p> <p>Ditto of Forecastle } <b>45.68</b></p> <p>Gross Tonnage } <b>2003.15</b></p> <p>Less Crew Space } <b>93.58</b></p> <p>Less Engine Room } <b>1909.57</b></p> <p>Register Tonnage as cut on Beam } <b>641.01</b></p> <p>Register Tonnage as cut on Beam } <b>1268.56</b></p> | <p><b>ONE, OR TWO DECKED, THREE DECKED VESSEL,</b><br/> <del>SPAR, OR AWNING DECKED VESSEL.</del></p> <p>Half Breadth (moulded) ... .. <b>8.00</b> Feet.</p> <p>Depth from upper part of Keel to top of Upper Deck Beams <b>25.80</b></p> <p>Girth of Half Midship Frame (as per Rule) ... .. <b>40.3</b></p> <p>1st Number ... .. <b>84.1</b></p> <p>1st Number, if a 3-Decked Vessel .. deduct 7 feet <b>7.0</b></p> <p>Length ... .. <b>1283.3</b></p> <p>2nd Number ... .. <b>2184.2</b></p> <p>Proportions— Breadths to Length... .. <b>7.8</b></p> <p>Depths to Length—Upper Deck to Keel... .. <b>10.98</b></p> <p>Main Deck ditto ... .. <b>15.9</b></p> | <p>Master <b>Finclair</b></p> <p>Built at <b>Dumbarton</b></p> <p>When built <b>1882</b> Launched <b>30th Sep. 1882.</b></p> <p>By whom built <b>Wm Denny &amp; Bro.</b></p> <p>Owners <b>Union F. Co. of N. Zealand (Ld)</b></p> <p>Residence <b>Dunedin</b></p> <p>Port belonging to <b>Dunedin</b></p> <p>Destined Voyage</p> <p>If Surveyed while Building, Afloat, or in Dry Dock, <b>While Building &amp; afloat</b></p> |
|--|--|--|

| 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 | Horse. | N° of Decks with flat laid | N° of Tiers of Beams |
|----------------------------|-------|---------|-----------------|-------|---------|---|-------|---------|------------------|--------|----------------------------|----------------------|
| 285                        | 4     |         | 36              | 0     |         | 22                                      | 0     |         | 253              |        | 3                          | 3                    |

Dimensions of Ship per Register, length, **285** breadth, **36.25** depth, **22.65** moulded depth **25.1 1/2**

| KEEL, depth and thickness  | Inches in Ship.  |         | Inches per Rule. |         | PLATES in Garboard Strakes, br'dth & thickness                   | Inches. In Ship.  |          | Inches. per Rule. |          |
|--|--|---------|------------------|---------|--|-------------------|----------|-------------------|----------|
|  | Feet.  | Inches. | Feet.            | Inches. |  | Feet.             | Inches.  | Feet.             | Inches.  |
| side bars  | 10   | 1 1/2   | 10               | 1 1/2   | 36   | 20                | 36       | 20                |          |
| STEM, moulding and thickness   | 10   | 2 3/4   | 10               | 2 3/4   | From Garboard to upper part of Bilges                            | 16                | 13       | 16                | 13       |
| STERN-POST for Rudder do. do.  | 10   | 5 3/4   | 10               | 5 1/2   | Of d'bling of Bilge, or increased thickness and length applied   |                   |          |                   |          |
| " " for Propeller  | 10   | 5 5/8   | 10               | 5 1/2   | From up. prt of Bilge to lr. edge of Sh'rstrake                  | 18                | 15       | 18                | 15       |
| Distance of Frames from moulding edge to moulding edge, all fore and aft         | 24 ins   |         | 24 ins           |         | Main Sheerstrake, breadth and thickness                          | 50 1/2            | 21-16    | 50                | 21-16    |
|  | 24 ins   |         | 24 ins           |         | Of d'bling at Sh'stk. & Ing. applied for side light              | 21                | 10       | 21                | 10       |
|  | 24 ins   |         | 24 ins           |         | From M'n. to Up. or Spar Dk Sh'rstrake                           | 19                | 9 1/2    | 19                | 9 1/2    |
| FRAMES, Angle Iron, for 2/3 length amidships                                     | 6  | 3 1/2   | 6                | 3 1/2   | Up. or Spar Dk Sh'rstrake, br'dth & thickness                    | 19                | 9 1/2    | 19                | 9 1/2    |
| Do. for 1/3 at each end  | 6  | 3 1/2   | 6                | 3 1/2   | Butt Straps to outside plating, breadth & thickness              | 7                 | spaces   | 7                 | spaces   |
| REVERSED FRAMES, Angle Iron  | 3 1/2  | 3       | 3 1/2            | 3       | Lengths of Plating   | 2                 |          | 2                 |          |
| FLOORS, depth and thickness of Floor Plate at mid line for half length amidships | Solid Brackets with holes as approved on sketch of mid. Dec 77 |         |                  |         | Shifts of Plating, and Stringers                                 | 2                 |          | 2                 |          |
| " thickness at the ends of vessel  | Solid Brackets with holes as approved on sketch of mid. Dec 77 |         |                  |         | Gunwale Plate on ends of Upper Deck Beams, breadth and thickness | 41                | 15       | 41                | 15       |
| " depth at 3/4 the half-bdth. as per Rule  | Solid Brackets with holes as approved on sketch of mid. Dec 77 |         |                  |         | Angle Iron on ditto  | 4                 | 4        | 4                 | 4        |
| " height extended at the Bilges  | Solid Brackets with holes as approved on sketch of mid. Dec 77 |         |                  |         | Tie Plates fore and aft, outside Hatchways                       | 4                 | 4        | 4                 | 4        |
| BEAMS, Upper, Spar, or Awning Deck   | 7 1/2  | 3 1/2   | 7 1/2            | 3 1/2   | Diagonal Tie Plates on Beams No. of Pairs                        | Complete Steel    |          | Complete Steel    |          |
| Single or d'ble Ang. Iron, Plate or Tee Bulb                                     | 7 1/2  | 3 1/2   | 7 1/2            | 3 1/2   | Flat of Up., Spar, or Awning Dk.*                                | 3/8               | 5/8      | 3/8               | 5/8      |
| Single or double Angle Iron on Upper edge  | 4  | 8       | 4                | 8       | How fastened to Beams  | Riveted           |          | Riveted           |          |
| Average space  | 4  | 8       | 4                | 8       | Stringer Plate on ends of Main or Middle Deck                    | 51                | 18       | 51                | 18       |
| AMS, Main, or Middle Deck  | 8 1/2  | 13      | 8 1/2            | 13      | Beams, breadth and thickness                                     | 51                | 18       | 51                | 18       |
| Single or d'ble Ang. Iron, Plate or Tee Bulb                                     | 3  | 3       | 3                | 3       | Is the Stringer Plate attached to the outside plating?           | Yes               |          | Yes               |          |
| Single or double Angle Iron, on Upper Edge                                       | 3  | 3       | 3                | 3       | Angle Irons on ditto, No. 2                                      | 5 1/2             | 4        | 5 1/2             | 4        |
| Average space  | 4  | 8       | 4                | 8       | Tie Plates, outside Hatchways                                    | 14                | 16       | 14                | 16       |
| BEAMS, Lower Deck—forward  | 7 1/2  | 3 1/2   | 7 1/2            | 3 1/2   | Diagonal Tie Plates on Beams, No. of pairs                       | 14                | 16       | 14                | 16       |
| Single or d'ble Ang. Iron, Plate or Tee Bulb                                     | 7 1/2  | 3 1/2   | 7 1/2            | 3 1/2   | Flat of Middle Deck* do. do.                                     | 3 1/2             | P.P.     | 3 1/2             | P.P.     |
| Single or double Angle Iron on Upper Edge  | 4  | 8       | 4                | 8       | How fastened to Beams  | nut & screw bolts |          | nut & screw bolts |          |
| Average space  | 4  | 8       | 4                | 8       | Stringer Plates on ends of Lower Deck, Hold or                   | 37                | 15       | 37                | 15       |
| BEAMS, Hold, or Orlop Lower Deck   | 6  | 3       | 6                | 3       | Overlap Beams  | 37                | 15       | 37                | 15       |
| Single or d'ble Ang. Iron, Plate or Tee Bulb                                     | 6  | 3       | 6                | 3       | Is the Stringer Plate attached to the outside plating?           | Yes               |          | Yes               |          |
| Single or double Angle Iron on Upper Edge  | 4  | 8       | 4                | 8       | Angle Irons on ditto, No. 2                                      | 4                 | 4        | 4                 | 4        |
| Average space  | 4  | 8       | 4                | 8       | Stringer or Tie Plates, outside Hatchways                        | 14                | 15       | 14                | 15       |
| KEELSONS Centre line, single or double plate, box, or Intercoastal Plating       | 4  | 9       | 4                | 9       | Flat of Lower Deck*  | 2 1/2             | Pine     | 2 1/2             | Pine     |
| " Rider Plate  | 3  | 6       | 3                | 6       | Ceiling betwixt Decks, thickness and material                    | 5                 | sparring | 5                 | sparring |
| " Bulb Plate to Intercoastal Keelson   | 3  | 6       | 3                | 6       | " in hold do. do.  | 2 1/2             | Pine     | 2 1/2             | Pine     |
| " Angle Irons  | 3  | 6       | 3                | 6       | Main piece of Rudder, diameter at head                           | 7 1/2             |          | 7 1/2             |          |
| " Double Angle Iron Side Keelson   | 3  | 6       | 3                | 6       | do. at heel  | 8                 | 4        | 8                 | 3 3/4    |
| " Side Intercoastal Plate  | 3  | 6       | 3                | 6       | Can the Rudder be unshipped afloat?                              | Yes               |          | Yes               |          |
| " do. Angle Irons  | 3  | 6       | 3                | 6       | Bulkheads No. 4 No. per Rule                                     | 4                 |          | 4                 |          |
| " Attached to outside plating with angle iron                                    | 3  | 6       | 3                | 6       | " Thickness of   | 12-10             |          | 12-10             |          |
| BILGE Angle Irons  | 6  | 4       | 6                | 4       | " Height up  | 3 1/2             |          | 3 1/2             |          |
| " do. Bulb Iron  | 6  | 4       | 6                | 4       | " Flat above at main sk.   | Double frames     |          | Double frames     |          |
| " do. Intercoastal plates riveted to plating for length                          | 6  | 4       | 6                | 4       | " How secured to sides of ship                                   | Double frames     |          | Double frames     |          |
| BILGE STRINGER Angle Irons   | 6  | 4       | 6                | 4       | " Size of Vertical Angle Irons                                   | 3 1/2 x 5 1/2     |          | 3 1/2 x 5 1/2     |          |
| Intercoastal plates riveted to plating for 3/5 length                            | 11   | 15      | 11               | 15      | " Are the outside Plates doubled two spaces of Frames in length? | Yes               |          | Yes               |          |
| SIDE STRINGER Angle Irons  | 6  | 4       | 6                | 4       |  |                   |          |                   |          |

The **FRAMES** extend in one length from **Bilge to Bilge & Bilge to gunwale** Riveted through plates with **7/8** in. Rivets, about **6-7** apart.

The **REVERSED ANGLE IRONS** on floors and frames extend **from middle line to Bilge in short length from Bilge to m. & up sk.** 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 **4 3/4** 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 all Strakes at Bilge for **160ft** length, treble riveted with Butt Straps **5/8** 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 1/2** 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 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted **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 1/4** ins. Breadth of laps of plating in single riveting **5** ins.

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? **Not done** No. of Breasthooks, **4** Crutches, **Dep. floor**

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? **"Morse's", "Dalziel"**

Manufacturer's name or trade mark **and "Hallside"**

The above is a correct description.

Builder's Signature, **Wm Denny & Brother** Surveyor's Signature, **J. D. Denny**

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

Official Number

State clearly where plating is of alternate thickness—as distinguished from diminished thickness at ends of vessel.

\* If Iron Deck, state if whole or part, and if wood deck is laid thereon.

Form No. 1 for Iron Ships—(400—24/5/81.)

**Workmanship.** Are the butts of plating planed or otherwise fitted? *Planed* 5917 gbs  
 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? *A very 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 *Two masts, built in accordance with the approved sketch, attached to Report on "Hauroto", N<sup>o</sup> 5871, see Secretary's letter of the 13<sup>th</sup> April 1882.*

| N <sup>o</sup> . | SAILS.                    | CABLES, &c.          | Fathoms. | Inches. | Test per Certificate. | Inches per Rule. | Machine where Tested & Suprntd. | ANCHORS.   |  | N <sup>o</sup> . | Weight. Ex. Stock. | Test per Certificate. | W'ght req'd per Rule. | Machine where Tested & Suprntd. |
|------------------|---------------------------|----------------------|----------|---------|-----------------------|------------------|---------------------------------|--|--|------------------|--------------------|-----------------------|-----------------------|---------------------------------|
|                  |                           |                      |          |         |                       |                  |                                 | (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.) | (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.) |                  |                    |                       |                       |                                 |
|                  | Fore Sails,               | Chain                | 135 3/4  | 1 1/8   | 59.2-2.0              | 2 7/8            | Walter                          | Bower Anchors  | 13751  | 32.0-8           | 30.14-1.14         | 32 cwt                |                       |                                 |
|                  | Fore Top Sails,           | Iron Stream Chain    | 135 3/4  | 1 1/8   | 52.15-0-0             | 1 13/16          | S. G.                           | 19 Sept-1882   | 13930  | 32.0-0           | 30.2-2.0           | total                 |                       |                                 |
|                  | Fore Topmast Stay Sails,  | or Steel Wire        | 75       | 1 1/8   | 22.15-0-0             | 75-1/8           | Dewis                           | 4 Oct-1882   | 13831  | 27.1-4           | 26.13-0-14         | 9 1/4                 |                       |                                 |
|                  | Main Sails,               | or Hempen Strm Cable | 90       | 1 1/8   | 34.3-2-0              | 90-9/2           |                                 | 4 - - -  |  | 91-1-12          |                    |                       |                       |                                 |
|                  | Main Top Sails, and spare | Towline, Hemp.       | 90       | 1 1/8   | 34.3-2-0              | 90-9/2           |                                 | 13 - - -   | 13868  | 10.2-17          | 12.13-0-14         | 10 1/2                |                       |                                 |
|                  |                           | or Steel Wire        | 90       | 1 1/8   | 34.3-2-0              | 90-9/2           |                                 | Stream Anchor  | 13866  | 5.2-6            | 7.18-1-21          | 5 1/4                 |                       |                                 |
|                  |                           | Hawser               | 90       | 1 1/8   | 34.3-2-0              | 90-9/2           |                                 | Kedge  | 13850  | 1-1-9            | 5.5-0-0            | 2 1/2                 |                       |                                 |
|                  |                           | Warp                 | 120      | 7 1/2   | 120-6                 | 90-7/2           |                                 | 2nd Kedge  | 13850  | 3.7              | 5.5-0-0            | 2 1/2                 |                       |                                 |

Standing and Running Rigging *wire thumps* sufficient in size and *good* in quality. She has *3* Long Boat and *3* others  
 The Windlass is *Paul's Patent* Capstan *good* and Rudder *good* Pumps *good*  
 Engine Room Skylights.—How constructed? *Taken from Cummings Bridge* How secured in ordinary weather? *Bolted.*  
 What arrangements for deadlights in bad weather? *Gratings and tarpaulins*  
 Coal Bunker Openings.—How constructed? *Cast Iron* How are lids secured? *Bayonet fixing* Height above deck? *Flush.*  
 Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *3 water ports, 5 scuppers, 3 cargo ports, 2 gangway ports and 2 mousing pipes.*  
 Cargo Hatchways.—How formed? *Iron Framings*  
 State size Main Hatch *11'9" x 11'6"* Forehatch *9'9" x 9'6"* Quarterhatch *10'6" x 10'6"*  
 If of extraordinary size, state how framed and secured? *not of extraordinary size*  
 What arrangement for shifting beams? *none*  
 Hatches, if strong and efficient? *Yes.*

| Order for Special Survey No. | Date                         | Order for Ordinary Survey No. | Date | No. | DATES OF SURVEYS held while building as per Section 18. | 1st.   | 2nd.  | 3rd.  | 4th.  | 5th.                                     |  |  |  |  |  |
|------------------------------|------------------------------|-------------------------------|------|-----|---|--|---|---|---|--|--|--|--|--|--|
| 1714                         | 6 <sup>th</sup> January 1882 |                               |      | 263 |   | 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>Specially Surveyed: - 1882: - Feb 23, Mar 6, 16, 22, 29; April 3, 9, 13, 18, 24, 27; May 3, 9, 12, 16, 19, 24, 26, 30; June 2, 7, 9, 13, 16, 19, 23, 27, 30; July 12, 25, 28; Aug 1, 3, 9, 11, 16, 18, 29, 31; Sep: 5, 8, 12, 15, 19, 22, 26, 27, 28; Oct 3, 10, 13, 17, 20, 24, 27, 31; Nov 7, 10, 14, 18, 21.</i> |  |  |  |  |

General Remarks (State quality of workmanship, &c.)  
*The workmanship in this vessel is good, and she has been built in accordance with the tracings, 5 in number, herewith attached, and in accordance with the Secretary's letters of the 5<sup>th</sup> Jan'y, 17<sup>th</sup> Mar., 13<sup>th</sup> April and 29<sup>th</sup> April 1882. The steel of which this vessel has been built, was tested at the Manufacturer's Works, as set forth in the Circulars issued by the Committee. She is built on the cellular principle all fore & aft, N<sup>o</sup> 1 Tank from fore to aft 98 ft long containing 113.3 tons of water; N<sup>o</sup> 2: 30 ft x 13.2 tons; N<sup>o</sup> 3: 26 ft x 53.5 tons; N<sup>o</sup> 4: 28 ft x 53 tons and N<sup>o</sup> 5: 50 ft x 52 tons. Each of these tanks has been tested as required by the Rules and found satisfactory.*  
 The Poop is 60 ft long with 4 ft wings for stairs; Open Bridge house 72 ft x house abaft 15'9" x 12 ft broad. Forecastle 44 ft long.

How are the surfaces preserved from oxidation? Inside *Cement & Paint* Outside *Paint*  
 I am of opinion this Vessel should be Classed *+ 100 A. 1.*  
 The amount of the Entry Fee ... £ 5: 0: 0 is received by me, *[Signature]*  
 Special ... £ 42: 15: 0 *[Signature]* 1882  
 Certificate ... *Gratis*  
 (Travelling Expenses, if any, £ ... )  
 Committee's Minute *Friday, 1st December 1882.*  
 Character assigned *[Signature]*  
 Double Bottoms *See particulars*

See plans with 'Wailora' No 5978

