

IRON SHIP.

No. 4075 Survey held at Kinghorn Harbour Date, First Survey 27th July Last Survey 15th Oct 1877

On the Screw Steamer "Tana" Master Robert Farwood

| | | |
|--|--|--|
| TONNAGE under Tonnage Deck } <u>541.67</u> | ONE, OR TWO DECKED, THREE DECKED VESSEL. | Built at <u>Kinghorn</u> |
| Ditto of Third, Spar, or Awning Deck. } <u>59.62</u> | SPAR, OR AWNING DECKED VESSEL. | When built <u>1874</u> Launched <u>25th Sept</u> |
| Ditto of Poop, or Raised Qr. Dk. } <u>39.70</u> | HALF BREADTH (moulded) <u>14.0</u> | By whom built <u>John R. & Sons</u> |
| Ditto of Houses on Deck } <u>33.65</u> | DEPTH from upper part of Keel to top of Upper Deck Beam } <u>15.9</u> | Owners <u>Garrison & Co. Ltd.</u> |
| Ditto of Forecastle } <u>9.92</u> | GIRTH of Half Midship Frame (as per Rule) <u>26.5</u> | Port belonging to <u>London</u> |
| Gross Tonnage } <u>683.96</u> | 1st NUMBER <u>56.4</u> | Destined Voyage <u>Coasting</u> |
| Less Crew Space } <u>23.34</u> | 1st NUMBER, if a THREE DECKED VESSEL [deduct 7 feet] | If Surveyed while Building, Afloat, or in Dry Dock. |
| Less Engine Room } <u>660.62</u> | LENGTH <u>179.1</u> | |
| Register Tonnage } <u>218.87</u> | 2nd NUMBER <u>1010.24</u> | |
| as cut on Beam } <u>441.75</u> | PROPORTIONS —Breadths to Length <u>6.4</u> | |
| | Depths to Length —Upper Deck to Keel <u>11.3</u> | |
| | Main Deck ditto | |

LENGTH on deck as per Rule .. 179 **BREADTH**—Moulded .. 28 **DEPTH** top of Floors to Upper Deck Beams .. 14 **Power of Engines** .. 80 **No. of Decks with flat laid** one **No. of Tiers of Beams** two

Dimensions of Ship per Register, length, 179.2 breadth, 28.3 depth, 14.35

| | Inches in Ship. | Inches per Rule. | | Inches in Ship. | Inches per Rule. |
|---|----------------------|----------------------|---|---------------------|----------------------|
| KEEL , depth and thickness | <u>7 1/2 x 2 1/2</u> | <u>4 1/2 x 2 1/2</u> | PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied | <u>50</u> | <u>8</u> |
| STEM , moulding and thickness | <u>7 1/2 x 2 1/2</u> | <u>4 1/2 x 2 1/2</u> | fin up. part of Bilge to Ir. edge of Sh'rstrake | <u>8</u> | <u>99 1/2</u> |
| FOREPOST for Rudder do. do. | <u>7 1/2 x 4 1/2</u> | <u>4 1/2 x 4 1/2</u> | Main Sheerstrake , breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake. | <u>42</u> | <u>11</u> |
| for Propeller | <u>7 1/2 x 4 1/2</u> | <u>4 1/2 x 4 1/2</u> | Up. or Spar Dk Sh'rstrake, brdth & thickness | <u>17 1/4</u> | <u>12 1/2</u> |
| Distance of Frames from moulding edge to moulding edge, all fore and aft | <u>22</u> | <u>22</u> | Butt Straps to outside plating, breadth & thickness | <u>6</u> | <u>5</u> |
| FRAMES , Angle Iron, for 1/2 length amidships | <u>3 1/2</u> | <u>3</u> | Lengths of Plating | <u>2</u> | <u>3</u> |
| Do. for 1/2 at each end | <u>3 1/2</u> | <u>3</u> | Shifts of Plating, and Stringers | <u>2</u> | <u>3</u> |
| REVERSED FRAMES , Angle Iron | <u>3</u> | <u>2 1/2</u> | Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness | <u>40</u> | <u>8</u> |
| FLOORS , depth and thickness of Floor Plate at mid line for half length amidships | <u>16</u> | <u>4</u> | Angle Iron on ditto | <u>4 1/2 x 7</u> | <u>4 1/2 x 3 1/2</u> |
| thickness at the ends of vessel | <u>16</u> | <u>4</u> | Tie Plates fore and aft, outside Hatchways | | |
| depth at 3/4 the half-bdth. as per Rule | <u>7 1/2</u> | <u>4</u> | Diagonal Tie Plates on Beams No. of Pairs, Planksheer material and scantling | | |
| height extended at the Bilges | <u>7 1/2</u> | <u>4</u> | Waterways do. do. | | |
| BEAMS , Upper, Spar, or Awning Deck } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } <u>5</u> <u>3</u> <u>4</u> | | | Flat of Upper Deck do. do. | | |
| Single or double Angle Iron on Upper edge | <u>3 1/2</u> | <u>3</u> | How fastened to Beams | | |
| Average space | <u>22</u> | <u>22</u> | Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness | | |
| BEAMS , Main, or Middle Deck } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } <u>5</u> <u>3</u> <u>4</u> | | | Is the Stringer Plate attached to the outside plating? | | |
| Single or double Angle Iron on Upper Edge | <u>3 1/2</u> | <u>3</u> | Angle Irons on ditto, No. | <u>3</u> | <u>3</u> |
| Average space | <u>22</u> | <u>22</u> | Tie Plates, outside Hatchways | <u>4 1/2 x 7</u> | <u>4 1/2 x 3 1/2</u> |
| BEAMS , Lower Deck, Hold, or Orlop } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } <u>8</u> <u>3</u> <u>8</u> | | | Diagonal Tie Plates on Beams, No. of pairs | | |
| Single or double Angle Iron on Upper Edge | <u>4</u> | <u>3</u> | Waterways materials and scantlings | | |
| Average space | <u>16</u> | <u>6</u> | Flat of Middle Deck do. do. | | |
| KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates | <u>16</u> | <u>6</u> | How fastened to Beams | | |
| " Rider Plate | | | Stringer Plates on ends of Lower Deck, Hold or Orlop Beams | <u>24</u> | <u>7</u> |
| " Bulb Plate to Intercoastal Keelson | | | Is the Stringer Plate attached to the outside plating? | | |
| " Angle Irons | | | Angle Irons on ditto, No. | <u>3</u> | <u>3</u> |
| " Double Angle Iron Side Keelson | | | Stringer or Tie Plates, outside Hatchways | <u>4 1/2 x 7</u> | <u>4 1/2 x 3 1/2</u> |
| " Side Intercoastal Plate | | | Flat of Lower Deck | | |
| " do. Angle Irons | | | Ceiling betwixt Decks, thickness and material | <u>2 1/2</u> | |
| " Attached to outside plating with angle iron | | | in hold do. do. | <u>4 1/2</u> | |
| BILGE Angle Irons | <u>4</u> | <u>3</u> | Main piece of Rudder, diameter at head | <u>2 1/2</u> | |
| " do. Bulb Iron | <u>8</u> | <u>8</u> | do. at heel | | |
| " do. Intercoastal plates riveted to plating for length | | | Can the Rudder be unshipped afloat? | <u>Yes</u> | |
| BILGE STRINGER Angle Irons | <u>4</u> | <u>3</u> | Bulkheads No. <u>3</u> Thickness of <u>5/16</u> | | |
| Intercoastal plates riveted to plating for length | | | Height up | <u>Upper Deck</u> | |
| SIDE STRINGER Angle Irons | <u>4</u> | <u>3</u> | How secured to sides of ship | <u>Double Frame</u> | |
| Transoms, material. <u>Knight heads.</u> <u>Hawse Timbers.</u> <u>Iron</u> | | | Size of Vertical Angle Irons <u>4 x 3 1/2</u> and distance apart <u>3</u> | | |
| Windlass <u>Handful de Bont</u> <u>Pall Bitt</u> | | | Are the outside Plates doubled two spaces of Frames in length? | <u>Yes</u> | |

The **FRAMES** extend in one length from Buddle line to Gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.

The **REVERSED ANGLE IRONS** on floors and frames extend from middle line to Bolt beams and to Gunwale 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 1/2 in. diameter, averaging 5 ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 3/4 in. diameter, averaging 3 1/2 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/2 ins. from centre to centre.

Butts of Main Strakes at Bilge for 99 1/2 length, treble riveted with Butt Straps 116 thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double & single riveted; with rivets 3/4 in. diameter, averaging 3 1/2 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 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 99 1/2 length amidships.

Butts of Main Stringer Plate, treble riveted for length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 120 1/2 length.

Breadth of laps of plating in double riveting 4 3/4 Breadth of laps of plating in single riveting 3

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

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

Beams of the various Decks, how secured to the sides? Welded brass brackets No. of Breasthooks, 3 Crutches, 2

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

Manufacturer's name or trade mark, Hoover's Crown Angles Frames Keelsons Plates Stringers Iron

The above is a correct description.

Builder's Signature, John McKee & Sons Surveyor's Signature, John McKee & Sons

Surveyor to Lloyd's Register of British and Foreign Shipping

19480 Iron.

Masts, Bowsprit, Yards, &c., are *solid* condition, and sufficient in size and length. If of Iron or Steel give
 size, length of Plating, Angle Irons, &c., and further explain by a Sketch showing how the lower Masts and Bowsprit are constructed, showing
 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.

| NUMBER for EQUIPMENT | Fathoms | Inches | Tons per Cable | Length & size req'd for use | Test req'd per fath. | ANCHORS | No. | Weight each | Test per Cable | Weight per fath. | Test req'd per fath. |
|----------------------------|---------|--------|-------------------|--------------------------------|-------------------------|---------------|-----|----------------|-------------------|---------------------|-------------------------|
| SAILS. | | | | | | Bowens | | | | | |
| Fore Sails | | | | | | | | | | | |
| Fore Top Sails | | | | | | | | | | | |
| Fore Topmast Stay Sails | | | | | | | | | | | |
| Main Masts | | | | | | | | | | | |
| Main Top Sails | | | | | | | | | | | |
| | | | | | | Stream | | | | | |
| | | | | | | Kedges | | | | | |

Standing and Running Rigging *solid* sufficient in size and *solid* in quality. She has *one* Long Boat and *one* Life Boat.
 The Windlass is *solid* Capstan *solid* and Rudder *solid* Pumps *solid*
 Engine Room Skylights. How constructed? *solid* How secured in ordinary weather? *solid*
 What arrangements for deadlights in bad weather? *solid*
 Coal Bunker Openings. How constructed? *solid* How are lids secured? *solid* Height above deck? *solid*
 Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *solid*
 Cargo Hatchways. How formed? *solid*
 Stern and Main Hatch *solid* Forehatch *solid* Quarterhatch *solid*
 If of extraordinary size, state how framed and secured? *solid*
 What arrangement for shifting beams? *solid*
 Hatches, if strong and efficient? *solid*

| Order for Special Survey No. | Dates | Survey | 1st. | 2nd. | 3rd. | 4th. | 5th. |
|------------------------------|-----------------|-----------------|--|---|----------------------------------|---|--|
| No. <i>10</i> | <i>10/10/17</i> | <i>10/10/17</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 plating was in position | When the ship was complete, and before the plating was finally coated or cemented | After the ship was launched and equipped |

General Remarks (State quality of workmanship, &c.) *The hull has been built in accordance with Scotch arrangements shown on approved sketch. Efficient fore and aft fitted in hatchways. The hatchways solid 2 1/2 thick. Plating boards 2 1/2 thick fitted all part double bottom. Fore hatch is 15' long by 4' 6" high. Each tested with head of water to height of deck draught. Plating made water tight. The deck house is 24' long by 12' wide. Corners are strengthened by brackets plates. Sides of hull are strong. Plating to fore and aft bulkheads fitted. Siding plating 1/4" thick.*

I am of opinion that the vessel is worthy of being registered and recommended that she be licensed as a cargo vessel.

State if one, two, or three, decked vessel, or if open, or carrying decked, and the lengths of poop, forecabin, and main quarter deck, and the length of double, or part double bottom.
 How are the surfaces preserved from oxidation? Inside *solid* Outside *solid*
 Name of opinion this Vessel should be *Classed*

The amount of the Entry Fee *£ 0 0 0* is received by me *James Mc Manus*
 Special *£ 34 4 0* 20th 1877
 Certificate