

# IRON SHIP.

No. 3582 Survey held at Glasgow Date, First Survey 6<sup>th</sup> April Last Survey 20<sup>th</sup> Nov 18 72

On the S.S. Harlingen Yard Number 60 Master H. K. White

|   |  |  |
|---|--|--|
| <b>TONNAGE</b> under Tonnage Deck } <u>210.95</u>           | <b>ONE, OR TWO-DECKED, THREE-DECKED VESSEL.</b>                              | Built at <u>Glasgow</u>  |
| Ditto of Third, Spar, or Awning Deck. } <u>—</u>            | <b>SPAR, OR AWNING-DECKED VESSEL.</b>  | When built <u>1872</u> Launched <u>10<sup>th</sup> Aug 1872</u>                      |
| Ditto of <u>Deck</u> , <u>Raised Or. Dk.</u> } <u>14.73</u> | <b>HALF BREADTH</b> (moulded)... .. <u>10.43</u>                             | By whom built <u>Dobie &amp; Co.</u>   |
| Ditto of Houses on Deck... } <u>5.40</u>                    | <b>DEPTH</b> from upper part of Keel to top of Upper Deck Beams <u>12.20</u> | Owners <u>Leith &amp; Harlingen Steam Ship Company</u>                               |
| Ditto of Forecastle } <u>—</u>                              | <b>GIRTH</b> of Half Midship Frame (as per Rule) <u>20.16</u>                | Port belonging to <u>Leith</u>   |
| Gross Tonnage <u>231.08</u>                                 | <b>1st NUMBER</b> <u>42.79</u>   | Destined Voyage <u>Clyde to Hamburg</u>  |
| Less Crew Space <u>10.53</u>                                | <b>1st NUMBER, if a THREE-DECKED VESSEL deduct 7 feet</b> <u>139</u>         | <input checked="" type="checkbox"/> Surveyed while Building, Afloat, or in Dry Dock. |
| Net Tonnage <u>220.55</u>                                   | <b>LENGTH</b> <u>139</u>   |  |
| Less Engine Room <u>73.95</u>                               | <b>2nd NUMBER</b> <u>5947</u>  |  |
| Register Tonnage as out on Beam } <u>146.60</u>             | <b>PROPORTIONS</b> —Breadths to Length <u>6 times</u>                        |  |
|   | Depths to Length—Upper Deck to Keel <u>1.13 times</u>                        |  |
|   | Main Deck ditto <u>—</u>   |  |

**LENGTH** on deck as per Rule 139 **BREADTH** Moulded... 20.8 **DEPTH** top of Floors to Upper Deck Beams 11 **Power of Engines** 40 **Horse.** 40 **N<sup>o</sup>. of Decks with flat laid** One **N<sup>o</sup>. of Tiers of Beams** —

|  | Inches in Ship. |    |    | Inches per Rule. |    |   | Flat Keel Plates, breadth and thickness  |                  | Inches. In Ship. | 16ths. In Ship. | Inches. required | 16ths. required |
|--|-----------------|----|----|------------------|----|---|--|------------------|------------------|-----------------|------------------|-----------------|
| <b>KEEL</b> , depth and thickness  | 7               | 15 | 8  | 7                | 15 | 8 | <b>PLATES</b> in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges | 42               | 7                | 30              | 7                |                 |
| <b>STEM</b> , moulding and thickness   | 16              | 4  | 5  | 6                | 4  | 5 | of doubling at Bilge, or increased thickness, and length applied <u>one strake</u>             | —                | 7                | —               | 7                |                 |
| <b>STERN-POST</b> for Propeller  | 6               | 3  | 4  | 6                | 3  | 4 | fm up. part of Bilge to lr. edge of Sh'rstrake   | —                | 5                | —               | 5                |                 |
| Distance of Frames from moulding edge to moulding edge, all fore and aft   | 21              |    |    |                  |    |   | Main Sheerstrake, breadth and thickness  | 40               | 9                | 30              | 9                |                 |
| <b>FRAMES</b> , Angle Iron, for $\frac{3}{4}$ length amidships   | 3               | 2  | 5  | 3                | 2  | 5 | of d'bling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake.            | —                | —                | —               | —                |                 |
| Do. for $\frac{1}{2}$ at each end  | 3               | 2  | 4  | 3                | 2  | 4 | Up. or Spar Dk Sh'rstrake, brdth & thickness   | —                | —                | —               | —                |                 |
| <b>REVERSED FRAMES</b> , Angle Iron  | 2               | 4  | 4  | 2                | 4  | 4 | Butt Straps to outside plating, breadth & thickness  | 8                | 9                | 8               | 9                |                 |
| <b>FLOORS</b> , depth and thickness of Floor Plate at mid line for half length amidships   | 12              | 5  | 6  | 12               | 5  | 6 | Lengths of Plating   | 10               | 7                | 8               | 9                |                 |
| thickness at the ends of vessel  | —               | —  | 4  | —                | —  | 4 | Shifts of Plating, and Stringers   | 2                | spaces           | 2               | spaces           |                 |
| depth at $\frac{3}{4}$ the half-bdth. as per Rule  | —               | —  | —  | —                | —  | — | Gunwale Plate on ends of <u>Awning Spar</u>  | 2                | 6                | 2               | 6                |                 |
| height extended at the Bilges  | Twice           |    |    |                  |    |   | Upper Deck Beams, breadth and thickness  | —                | —                | —               | —                |                 |
| <b>BEAMS</b> , Upper, Spar, or Awning Deck   | 5               | 3  | 7  | 5                | 3  | 7 | Angle Iron on ditto  | 3                | 3                | 3               | 3                |                 |
| Single or d'ble Ang. Iron, Plate or Tee Bulb Iron  | —               | —  | —  | —                | —  | — | Tie Plates fore and aft, outside Hatchways   | 10               | 9                | 6               | 6                |                 |
| Single or double Angle Iron on Upper edge  | —               | —  | —  | —                | —  | — | Diagonal Tie Plates on Beams No. of Pairs  | none             | 16               | none            | —                |                 |
| Average space  | 42              |    |    |                  |    |   | Planksheer material and scantling  | Gutter Waterway  |                  |                 |                  |                 |
| <b>BEAMS</b> , Main or Middle Deck   | —               | —  | —  | —                | —  | — | Waterways do. do.  | Pine             |                  |                 |                  |                 |
| Single or d'ble Ang. Iron, Plate or Tee Bulb Iron  | —               | —  | —  | —                | —  | — | Flat of Upper Deck do. do.   | 3 nuts & screws  |                  |                 |                  |                 |
| Single, or double Angle Iron, on Upper Edge  | —               | —  | —  | —                | —  | — | How fastened to Beams  | —                |                  |                 |                  |                 |
| Average space  | —               |    |    |                  |    |   | Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness                     | —                |                  |                 |                  |                 |
| <b>BEAMS</b> , Lower Deck, Hold or Orlop   | —               | —  | —  | —                | —  | — | Is the Stringer Plate attached to the outside plating?   | —                |                  |                 |                  |                 |
| Single or d'ble Ang. Iron, Plate or Tee Bulb Iron  | —               | —  | —  | —                | —  | — | Angle Irons on ditto, No.  | —                |                  |                 |                  |                 |
| Single or double Angle Iron on Upper Edge  | —               | —  | —  | —                | —  | — | Tie Plates, outside Hatchways  | —                |                  |                 |                  |                 |
| Average space  | —               |    |    |                  |    |   | Diagonal Tie Plates on Beams, No. of pairs   | —                |                  |                 |                  |                 |
| <b>KEELSONS</b> Centre line, single or double plate, box, or Intercostal, Plates   | 8               | 8  | 8  | 9                | 8  | 8 | Waterways materials and scantlings   | —                |                  |                 |                  |                 |
| " Rider Plate  | —               | —  | —  | 6                | 2  | 6 | Flat of Middle Deck do. do.  | —                |                  |                 |                  |                 |
| " Bulb Plate to Intercostal Keelson  | —               | —  | —  | —                | —  | — | How fastened to Beams  | —                |                  |                 |                  |                 |
| " Angle Irons  | 5               | 4  | 10 | 3                | 3  | 6 | Stringer Plates on ends of Lower Deck, Hold or Orlop Beams                                     | —                |                  |                 |                  |                 |
| " Double Angle Iron Side Keelson   | —               | —  | —  | —                | —  | — | Is the Stringer Plate attached to the outside plating?   | —                |                  |                 |                  |                 |
| " Side Intercostal Plate   | —               | —  | —  | —                | —  | — | Angle Irons on ditto, No.  | —                |                  |                 |                  |                 |
| " do. Angle Irons  | —               | —  | —  | —                | —  | — | Stringer or Tie Plates, outside Hatchways  | —                |                  |                 |                  |                 |
| " Attached to outside plating with angle iron  | —               | —  | —  | —                | —  | — | Flat of Lower Deck   | —                |                  |                 |                  |                 |
| <b>BILGE</b> Angle Irons <u>All fore &amp; aft</u>   | 4               | 4  | 10 | 3                | 3  | 6 | Ceiling between Decks, thickness and material in hold <u>to Bilge &amp; Elm &amp; Pine</u>     | Shanking         |                  |                 |                  |                 |
| " do. Bulb Iron  | —               | —  | —  | —                | —  | — | Main piece of Rudder, diameter at head   | 3                | 3                | 3               | 3                |                 |
| " do. Intercostal plates riveted to plating for <u>—</u> length  | —               | —  | —  | —                | —  | — | do. at heel  | 2                | 4                | 2               | 4                |                 |
| <b>BILGE STRINGER</b> Angle Irons  | 3               | 3  | 6  | 3                | 3  | 6 | Can the Rudder be unshipped afloat? <u>Yes</u>   | —                |                  |                 |                  |                 |
| Intercostal plates riveted to plating for <u>—</u> length  | —               | —  | —  | —                | —  | — | Bulkheads No. <u>4</u> Thickness of <u>4/16</u>  | —                |                  |                 |                  |                 |
| <b>SIDE STRINGER</b> Angle Irons   | —               | —  | —  | —                | —  | — | Height up <u>to deck</u>   | —                |                  |                 |                  |                 |
| Transoms, material. Knight-heads. Hawse Timbers.   | Iron            |    |    |                  |    |   | How secured to sides of ship   | By double Frames |                  |                 |                  |                 |
| Windlass <u>Harfield's Patent</u> Pall Bitt <u>—</u>   | —               |    |    |                  |    |   | Size of Vertical Angle Irons <u>2 1/4 x 2 1/4 x 1/16</u> and distance apart <u>30</u> ins.     | —                |                  |                 |                  |                 |
| The <b>FRAMES</b> extend in one length from <u>Keel</u> to <u>Gunwale</u> Riveted through plates with <u>5/8</u> in. Rivets, about <u>5</u> apart.                             | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| The <b>REVERSED ANGLE IRONS</b> on floors and frames extend <u>from</u> middle line to <u>above side stringer</u> and to <u>Upper Deck</u> alternately                         | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| <b>KEELSONS</b> . Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u> And butts properly shifted? <u>Yes</u>                                      | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| <b>PLATING</b> . Garboard, double riveted to Keel, with rivets <u>7/8</u> in. diameter, averaging <u>4 3/8</u> ins. from centre to centre.                                     | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Edges of Garboards and to upper part of Bilge, worked clencher, <u>double</u> riveted; with rivets <u>5/8</u> in. diameter, averaging <u>2 3/4</u> ins. from centre to centre. | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets <u>5/8</u> in. diameter averaging <u>2 3/4</u> ins. from centre to centre.                        | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Butts of <u>—</u> Strakes at Bilge for <u>—</u> length, treble riveted with Butt Straps <u>—</u> thicker than the plates they connect.   | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Edges from bilge to Main Sheerstrake, worked clencher, <u>double</u> or single riveted; with rivets <u>5/8</u> in. diameter, averaging <u>2 3/4</u> ins. from cr. to cr.       | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets <u>5/8</u> in. diameter, averaging <u>2 3/4</u> ins. from cr. to cr.                          | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double <u>or single</u> riveted, at lower edges, upper edges <u>single</u>                             | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Butts of Main Sheerstrake, treble riveted for <u>—</u> length amidships. Butts of Upper or Spar Sheerstrake, treble riveted <u>—</u> length amidships.                         | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Butts of Main Stringer Plate, treble riveted for <u>—</u> length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for <u>—</u> length.                         | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Breadth of laps of plating in double riveting <u>6 times</u> Breadth of laps of plating in single riveting <u>3 1/2 times</u>  | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Butt Straps of Keelsons, Stringer and Tie Plates, <u>none</u> , double or single Riveted? <u>—</u>   | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Waterway, how secured to Beams <u>Gutter Waterway</u> (Explain by Sketch, if necessary.)   | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Beams of the various Decks, how secured to the sides? <u>By knees</u> No. of Breasthooks, <u>Three</u> Crutches, <u>Three</u>  | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>B. Boiler</u>   | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |
| Manufacturer's name or trade mark, <u>Govan</u>  | —               |    |    |                  |    |   |  |                  |                  |                 |                  |                 |

The above is a correct description.

Builder's Signature, Dobie & Co. Surveyor's Signature, Sam. Lathorn

**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? A few

Masts, ~~Bowsprit, Yards,~~ &c., are Pitch Pine 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 and aft Schooner Rigged

Tested at Glasgow by Wm Taylor  
 23<sup>rd</sup> and 27<sup>th</sup> Sept 1872

10782. Iron  
 Tested at Glasgow by Wm Taylor  
 23<sup>rd</sup> Sept 1872

| NUMBER for EQUIPMENT <u>6541</u> |                         | Fathoms.  | Inches. | Test per Certificate. | In. req'd per Rule. | Test req'd per Rule. | ANCHORS, &c. | N <sup>o</sup> . | Weight. Ex. Stock. | Test per Certificate. | W'ght req'd per Rule. | Test req'd per Rule. |
|----------------------------------|-------------------------|---|---------|-----------------------|---------------------|----------------------|--------------|------------------|--------------------|-----------------------|-----------------------|----------------------|
| N <sup>o</sup> .                 | SAILS.                  | CABLES, &c.   |         | 180                   | 15 1/16             | 15-17.2              | Bowers       | 1                | 6.3.12             | 9.2.2.0               | 6 1/2                 | 8 1/2                |
|                                  | Chain                   | (Machine where Tested, date, and name of Superintendent.) |         |                       |                     |                      |              |                  |                    |                       |                       |                      |
| One                              | Fore Sails,             | Hempen Stream   |         | 40                    | 9 1/16              | 7-5                  | Stream       | 1                | 2.0.7              | 1 1/4                 | 2 1/4                 | 1 1/4                |
| Suit                             | Fore Top Sails,         | Iron Cable  |         |                       |                     |                      |              |                  |                    |                       |                       |                      |
|                                  | Fore Topmast Stay Sails | Hawser  |         | 90                    | 5                   |                      | Kedges       | 1                | 1.0.26             |                       |                       |                      |
|                                  | Main Sails,             | Towlines  |         |                       |                     |                      |              |                  |                    |                       |                       |                      |
|                                  | Main Top Sails,         | Warp  |         | 90                    |                     |                      |              |                  |                    |                       |                       |                      |
| and                              |                         | quality <u>good</u>                                       |         |                       |                     |                      |              |                  |                    |                       |                       |                      |

Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has Two ~~Boat~~ Boat ~~sway~~

The Windlass is Good Capstan — and Rudder Good Pumps Good and efficient

Engine Room Skylights.—How constructed? Plate & Angle Iron & Oak How secured in ordinary weather? Iron Bars

What arrangements for deadlights in bad weather? Thick Glass and Iron Bars

Coal Bunker Openings.—How constructed? Iron Castings How are lids secured? Slots Height above deck? Flush

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? Pipes and Ports

Cargo Hatchways.—How formed? Plate and Angle Irons

State size Main Hatch 10.6" x 7.0" Forehatch 5.6 x 4.6 Quarterhatch —

If of extraordinary size, state how framed and secured? —

What arrangement for shifting beams? —

Hatches, If strong and efficient? Yes

Order for Special Survey No. 864 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Built under

Date 3<sup>rd</sup> July 1872 Surveys held 2nd. On the plating during the progress of riveting Special Survey between

Order for Ordinary Survey No. — while building 3rd. When the beams were in and fastened, and before the decks were laid 6<sup>th</sup> April & 20<sup>th</sup> Nov 1872

Date — as per 4th. When the ship was complete, and before the plating was finally coated or cemented —

No. 60 in builder's yard. Section 18. 5th. After the ship was launched and equipped —

**General Remarks,**

*Has been built in general conformity with the Rules for 1871-72 and the appended Midship Section with a view to Class 90 A.*

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, forecabin or raised quarter deck, or of double or part double bottom.  
*One decked vessel having a short raised quarter deck*

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

I am of opinion this Vessel should be Classed + 90 A1

The amount of the Entry Fee ... £ 3 : 9 : 0 is received by me,

Special ... £ 11 : 11 : 0

Certificate ... Gratis

(Travelling Expenses) (if any) £ —

Committee's Minute 22<sup>nd</sup> Nov 18 72

Character assigned 90 A1

*Saml. Lapham*  
 This vessel appears to be double the class 90 A1 as recommended.  
 Lloyd's Register Foundation