

IRON SHIPS.

4782

Dec 25/1886

No. 249 Survey held at Glasgow Date June 22nd 1886
 on the Scow S. Ludworth Master Muldrum
 Tonnage under tonnage deck 44.58 Built at Glasgow When built 1885 Launched 12th May 1885
 Ditto of poop or spar deck _____
 Ditto of engine room _____
 Total Register tonnage 304.35 Port belonging to London Destined Voyage Coasting
 Gross tonnage 447.58
 Surveyed while Building, Afloat, or in Dry Dock whilst building and afloat

PLANS CASE

Length aloft 109.8 Extreme Breadth 20.05 Depth from top of Upper Deck Beam to top of Floor 14.74 Power of Engines 40 N^o. of Decks One
 (Dimensions of Ship per Register, length 109.8 breadth 20.05 depth 14)

| | Inches in Ship. | | | Inches required per Rule. | | |
|---|---------------------------------------|-----------------|----------------|---------------------------|---------------------------|--------------------------|
| | Inches in Ship. | Inches in Ship. | 16ths in Ship. | Inches required per Rule. | Inches required per Rule. | 16ths required per Rule. |
| Keel, if bar iron, depth and thickness | 3 1/2 x 7/8 | | | 2 1/2 x 1 1/2 | | |
| „ if plate iron, breadth and thickness | 2 1/2 x 7/8 | | | 2 1/2 x 1 1/2 | | |
| Stem, if bar iron, moulding and thickness | 7 x 2 1/2 | | | 5 3/4 x 2 1/2 | | |
| „ if plate iron, breadth and thickness | 7 x 2 1/2 | | | 5 3/4 x 2 1/2 | | |
| Stern-post, if bar iron, moulding and thickness | 7 x 4 1/2 | | | 5 3/4 x 5 | | |
| „ if plate iron, breadth and thickness | 7 x 4 1/2 | | | 5 3/4 x 5 | | |
| Distance of Frames from moulding edge to moulding edge, all fore and aft | 21 | | | 21 | | |
| Frames, Size of Angle Iron, single or double .. | 3 1/2 | 3 | 70 | 3 1/2 | 3 | 70 |
| „ Reversed Iron to every frame or every other frame | to side of keelson and to the gunwale | | | | | |
| Floors, depth and thickness of Floor Plate at mid line | 3 1/2 | 3 | 70 | 3 1/2 | 3 | 70 |
| „ Ditto ditto at Bilge Keelson | 3 1/2 | 3 | 70 | 3 1/2 | 3 | 70 |
| „ Size of Reversed Angle Iron, and No. at top of Floor Plate | 2 1/2 | 2 1/2 | 70 | 2 1/2 | 2 1/2 | 70 |
| Beams, Deck (N ^o .) double Angle Iron, Plate, Tee, or Bulb Iron | 8 | 3 | 70 | 8 | 3 | 70 |
| „ „ double or single Angle Iron, on edge | 3 | 3 | 70 | 3 | 3 | 70 |
| „ „ average space between | 3 feet 0 inches | | | | | |
| „ Hold, or Lower Deck (N ^o .) double Angle, Tee, or Bulb Iron | 8 | 3 | 70 | 8 | 3 | 70 |
| „ „ double or single Angle Iron, on edge | 3 | 3 | 70 | 3 | 3 | 70 |
| „ „ average space between | 3 feet 0 inches | | | | | |
| „ Paddle, sided and moulded, thickness of Plate size of Angle Iron | 3 feet 0 inches | | | | | |
| „ Engine | 3 feet 0 inches | | | | | |
| Keelson, single or double plate, box, or intercostal | intercostal | | | | | |
| „ Size of Plates | 3 1/2 | 3 | 70 | 3 1/2 | 3 | 70 |
| „ Size of Angle Irons | 4 | 3 | 70 | 4 | 3 | 70 |
| „ Side, single or double, plate, box, or intercostal | 30 | 3 | 70 | 30 | 3 | 70 |
| „ Bilge (No.) at each Bilge, single, or double, plate, or box | 30 | | | | | |

| | Inches in Ship. | 16ths in Ship. | Inches required per Rule. | 16ths required per Rule. |
|---|----------------------------|----------------|---------------------------|--------------------------|
| Plates in Garboard Strakes, breadth and thickness | 30 | 70 | 2 1/2 | 70 |
| Ditto from Garboard to upper part of Bilges .. | 8 | 70 | 8 | 70 |
| „ from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold | 70 | 70 | 70 | 70 |
| „ from 3/4ths depth of Hold to lower edge of Sheerstrake | 90 | 70 | 90 | 70 |
| „ Sheerstrake, breadth and thickness | 30 | 70 | 30 | 70 |
| Butt Straps to outside plating, breadth and thickness | 8 1/2 | 70 | 8 1/2 | 70 |
| Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness | 2 1/2 | 70 | 2 1/2 | 70 |
| Angle Iron on ditto | 4 x 3 | 70 | 4 | 70 |
| Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways .. | 9 | 70 | 9 | 70 |
| Diagonal Tie Plates on ditto | 12 | 70 | 12 | 70 |
| Planksheer, materials and scantlings | see sketch | | | |
| Waterway ditto ditto | see sketch | | | |
| Flat of Upper Deck, thickness and material .. | 3/4 in. plate | | | |
| „ „ how fastened to Beams .. | nuts & screws | | | |
| Ceiling betwixt Decks and in Hold, thickness and material | 3/4 in. plate | | | |
| Clamps or Spirketting ditto | - | | | |
| Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness .. | - | | | |
| Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams | - | | | |
| Stringers in Hold | see sketch | | | |
| Flat of Lower Deck, thickness and material .. | 3/4 in. plate | | | |
| Main piece of Rudder, diameter at head | 4 1/2 | 70 | 4 1/2 | 70 |
| „ „ at heel | 3 1/2 | 70 | 3 1/2 | 70 |
| (Can the Rudder be unshipped afloat) .. | Yes | | | |
| Bulkheads, N ^o . Thickness of .. | 5 | 70 | 5 | 70 |
| „ Height up upper deck .. | - | | | |
| „ how secured to the sides of the ship .. | riveted between two frames | | | |
| „ size of vertical angle irons .. and their distance apart .. | 30 feet | | | |

Transoms, material See Plan, if none, in what manner compensated for. _____
 Knight-heads, and Hawse Timbers See Plan _____
 The Frames extend in one length from middle line to gunwale rivetted through plates with (3/4 in.) rivets, about (5) apart.
 The reverse angle irons on the floors extend in one length across the middle line from side stringer to D^o
 „ „ „ on the frames „ „ „ from middle line to gunwale
 Keelson, how are the various lengths of plates or angle irons connected? by lining pieces
 Plates, Garboard, double or rivetted to keel, double or at upper edge, with rivets (3/4 in.) diameter, averaging (3 in.) apart.
 „ Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 1/2 in.) apart.
 „ Butts from Keel to turn of bilge, worked carvel with butt straps (7/8, 9/16, 1/8) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 1/2 in.) 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 clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 1/2 in.) 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 lower edge Double
 „ Butts from bilge to planksheers, worked carvel with butt straps (7/8, 9/16) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 1/2 in.) apart. Breadth of laps in double rivetting (3/4 in.) Breadth of laps in single rivetting (3/4 in.)
 Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? Double
 Planksheer, how secured to the plating of the sides See sketch See Bulwarks 40 sheets with 1/2 in. screws
 Waterway „ „ planksheer and to the Beams See sketch See
 Deck Beams, how secured to the side? Welded knees rivetted to sides
 Hold or Lower Deck ditto _____
 Paddle „ „ _____ No. of breasthooks Three crutches Three
 What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.? Glasgow Boiler
 Manufacturer's name or trade mark _____

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

Builder's Signature Thomas Wigham Esq Surveyor's Signature A. D. Parkin

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 IRON 439-0405

Workmanship. Are the lands or laps of the clewwork 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?* *Yes*

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? *No. Butts and lands being to have rivets*

Her Masts, Bowsprit, Yards, &c., are in *Good* condition, and sufficient in size and length. (If 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.)

The Bower Anchors are slightly under the prescribed weight as per Table 22, and would be to leave the assigning of the figures for the favorable consideration of the Committee.

| No. | SAILS. | CABLES, &c. | | | ANCHORS and their weights | | |
|----------|--------------------------|-----------------------------|------------|-----------------|---------------------------|---------------|-----------------|
| | | Fathoms. | Inches. | Tested to Tons. | No. | Weight. | Tested to Tons. |
| <i>A</i> | Fore Sails, | Chain <i>20 1/2</i> | <i>210</i> | <i>1 7/8</i> | <i>25 1/2</i> | <i>3 1/2</i> | <i>11.15.0</i> |
| | Fore Top Sails, | Hempen Stream Cable | <i>90</i> | <i>1</i> | | <i>2.0.7</i> | |
| | Fore Topmast Stay Sails, | Hawser <i>Chan.</i> | <i>90</i> | <i>1 1/2</i> | | <i>2.2.5</i> | <i>11.11.0</i> |
| | Main Sails, | Towlines | <i>90</i> | <i>5</i> | | <i>3.0.3</i> | <i>10.2.0</i> |
| | Main Top Sails, | Warp | | | | <i>1.2.16</i> | <i>8.0.0</i> |
| | and | All of <i>Good</i> quality. | | | | <i>1.3.8</i> | <i>4.4.0</i> |
| | | | | | | <i>1.2.0</i> | <i>4.4.0</i> |
| | | | | | | <i>1.3.2</i> | <i>4.4.0</i> |
| | | | | | | <i>1.3.2</i> | <i>4.4.0</i> |

Her Standing and Running Rigging *Gal. & Mast & Stays* sufficient in size and *Good* in quality.

She has *one* Long Boat and *one* Life Boat

The present state of the Windlass is *new* Capstan *new* and Rudder *new* Pumps *new and efficient*

Order for Special Survey DATES of

No. *434* Surveys held *1* while building

Date *May 1866* as per

Order for Ordinary Survey 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 *Built under special survey*

3rd. When the beams were in and fastened, and before the decks were laid *from the 20th June to the 27th June 1866*

4th. When the ship was complete, and before the plating was finally coated

5th. After the ship was launched

State if she has a Spar Deck *No* Poop *No* or Forecastle *No*

General Remarks,

Fitted with a side stringer in lieu of Hold Beams, framed with a foundation plate riveted to double reverse bars 12x70, Bulb Bar 8x90 and two Angle Bars 4x3x90 extending fore and aft. The Floors are 34 lbs deep and an iron flat laid on top 90 thick thus making a double bottom, with two inch American Elm Ceiling laid on top, the plating secured to the sides by double Angle Bars, the inner riveting to the side plating the other to Reverse Bars

As compensation for excess of length the Sheerstrake is increased to 33 lbs in breadth and 90 in thickness, and extended 15 lbs above the Gunwale plate, eight pairs of Diagonal Tie plates fitted on Beams 12x70, and between all Hatches the Beams are plated with 70 plates extending flush with coverings. The extra side intercostal keelson recommended has been fitted

In what manner are the surfaces preserved from oxidation? Inside *with Asphalt.* remainder with *Red*

Ditto ditto Outside *Lead and Oil paints*

I am of opinion this Vessel should be Classed *A. 1*

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

June 1866 Special£ *22.8* : :

Certificate (if required)£ *Printed*

Committee's Minute *26th June 1866*

Character assigned *B*

To have for 1/2

See to the new...

5/7/11

5/7/11

D. D. Pauling

This Vessel appears eligible for the B. Class but the weight of two bower anchors are under the weight required by Table 22.

Lloyd's Register