

See annexed Report.

IRON SHIPS.

Re 21/12/70

No. 3580 Survey held at Wingham, Granton Date, First Survey 24th June 1868 Last Survey 29th September 1870

On the Screw Steam Ship Scotland

Master Pinhey

Age under 20 1/4

ONE, OR TWO DECKED THREE DECKED VESSELS.

of Spar Deck, ✓

of Poop, or sed Or. Dk. ✓

of Houses 43.18

of Forecastle 84.83

Tonnage 2145.45

no Space, 88.44

er Tonnage, ✓

on Beam, ✓

Room 800.24

Tonnage, as a 1256.4

, cut on the Beam

Half moulded breadth ... 18'

Depth from upper part of Keel to top of Upper Deck Beams (or as per Rule, Section 11) ... 22.83

Girth of Half Midship Frame (as per Rule) ... 36'

1st Number ... 46.83

Length ... 298

2nd Number ... 22,895.34

Depths to Length. 10' 8" 15' 02"

Half Moulded Breadth ... 18'

Total Depth if three or more Decks ... 29.83

Total Girth of Half Midship Frame ... 43'

3rd Number ... 90.83

Length ... 298

4th Number ... 24,064.34

Breadths to Length ... 8.24

Built at Wingham

When built 1868:1869 Launched 4th September 1869

By whom built John Wemy

Owners John Wemy

Port belonging to Leith

Destined Voyage Palautta via Liverpool

Surveyed while Building, Afloat, or in Dry Dock

| Feet. | Inches. | Feet. | Inches. | Depths from top of Floors to Upper and Main Deck Beams, as per Rule | Feet. | Inches. | Horse. | No. of Decks, | No. of Tiers of Beams, |
|---|---------|-------|---------|---|-------|---------|--------|---------------|------------------------|
| 298 | 0 | 36 | 0 | 24 | 19 | 10 | 500 | Three | Three |
| Transoms of Ship per Register, length 304.1 breadth, 34.9 depth, 24.6 | | | | | | | | | |
| Inches in Ship. Inches required per Rule. | | | | | | | | | |
| Bar iron, depth and thickness | 11 | 3 | 11 | 3 | 11 | 3 | | | |
| Centre through plate, depth and thickness | 13 | 3 | 13 | 3 | 13 | 3 | | | |
| Half bar iron, moulding and thickness | 11 | 3 | 11 | 3 | 11 | 3 | | | |
| Post do. do. do. | 8 | 3 | 8 | 3 | 8 | 3 | | | |
| Edge of Frames from moulding edge to | 10 | 4 | 10 | 4 | 10 | 4 | | | |
| Moulding edge, all fore and aft | 21 | | 21 | | 21 | | | | |
| Inches in Ship. Inches required per Rule. | | | | | | | | | |
| Size of Angle Iron, for 1/2 length amidships | 5 | 3 | 5 | 3 | 5 | 3 | | | |
| 1/2 at each end | 5 | 3 | 5 | 3 | 5 | 3 | | | |
| Frames, size of Angle Iron | 4 | 3 | 4 | 3 | 4 | 3 | | | |
| Depth and thickness of Floor Plate at | 24 | | 24 | | 24 | | | | |
| Line for half the length amidships | 30 | | 30 | | 30 | | | | |
| at the ends | 30 | | 30 | | 30 | | | | |
| do. do. at Bilge Keelson | 10 | | 10 | | 10 | | | | |
| do. height extended at the Bilges | 54 | | 54 | | 54 | | | | |
| Transoms, Three Decked, Spar, or Awning Decked | 9 | | 9 | | 9 | | | | |
| (No. 48) single or double Angle Iron, Plate or Tee Bulb Iron | 9 | | 9 | | 9 | | | | |
| Single or double Angle Iron on Upper edge | 3 | 3 | 3 | 3 | 3 | 3 | | | |
| Average space | 42 | | 42 | | 42 | | | | |
| Beams, Upper or Middle Deck (No. 42) single, or double Angle Iron, Plate or Tee Bulb Iron | 9 | | 9 | | 9 | | | | |
| Single, or double Angle Iron, on Upper Edge | 3 | 3 | 3 | 3 | 3 | 3 | | | |
| Average space | 42 | | 42 | | 42 | | | | |
| Beams, Lower Deck or Orlop (No. 66) single, or double Angle Iron, Plate or Tee Bulb Iron | 9 | | 9 | | 9 | | | | |
| Single or double Angle Iron on Upper Edge | 3 | 3 | 3 | 3 | 3 | 3 | | | |
| Average space | 42 | | 42 | | 42 | | | | |
| Forecastle Beams, double or single plate, box, or intercostal, size of Plates | 16 | | 16 | | 16 | | | | |
| Do. Bulb Plate to Intercostal Keelson | 12 | | 12 | | 12 | | | | |
| Do. Size of Angle Irons | 6 | 5 | 6 | 5 | 6 | 5 | | | |
| Do. Side Intercostal Keelson, size of Plates | 25 | | 25 | | 25 | | | | |
| Do. Angle Irons on tops of Floors | 6 | 5 | 6 | 5 | 6 | 5 | | | |
| Do. Bilge Keelson, Bulb Iron | 9 | | 9 | | 9 | | | | |
| Do. do. Angle Irons | 6 | 5 | 6 | 5 | 6 | 5 | | | |
| Do. Side Stringers (No. one) size of Angle Irons | 6 | 5 | 6 | 5 | 6 | 5 | | | |

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

Knight-heads Iron Hawse Timbers Iron

Windlass Harfield's Patent Pall Bitt Iron

The Frames extend in one length from Keel to Gunwale

The Reverse Angle Irons on the floors extend across the middle line from Side Intercostal Keelson to Upper Deck alternately with these

On all the Frames and to Middle Deck

Keelsons. Are the various lengths of Plates and Angle Irons properly connected? Yes And are their butts properly shifted? Yes

Plates, Garboard, double or treble Riveted to Keel, double or at upper edge, with Rivets (1/4 in.) diameter, averaging (5 1/2 ins.) from centre to centre.

Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (1/8 in.) diameter, averaging (3 1/2 ins.) from centre to centre.

Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (1/4) thick, treble, double or single Riveted; with Rivets (1/8 in.) diameter averaging (3 1/2 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? No

Do. Edges from bilge to sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets (1/8 in.) diameter, averaging (3 1/2 ins.) from centre to centre.

Do. Edges of Sheerstrake, double or single Riveted. At upper edge Double riveted At lower edge Double riveted

Do. Butts from Bilge to Planksheers, worked Carvel with Butt Straps (1/6) thick, double or single Riveted; with Rivets (1/8 in.) diameter, averaging (3 1/2 ins.) from centre to centre. Breadth of laps in double Riveting (5 1/4) Breadth of laps in single Riveting ()

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

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

Waterway " " planksheer and to the Beams, if necessary.

Beams of the various Decks, how secured to the sides? Welded to the Plates.

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

Manufacturer's name or trade mark, Frames. L. M. B. Walker. Plates. Shepton Malleable Iron Co.

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

Signature, John Wemy Surveyor's Signature, E. Wemy

| Inches. In Ship. | 16ths. In Ship. | Inches. required per Rule. | 16ths. required per Rule. |
|---|-----------------------------|----------------------------|---------------------------|
| Flat Keel Plates, breadth and thickness | 36 | 14 | 36 |
| Plates in Garboard Strakes, breadth and thickness | 13 | 11 | 11 |
| Do. from Garboard to upper part of Bilges | 13 | 11 | 11 |
| Do. of doubling at Bilge, or increased thickness, and length applied | 12 | 11 | 11 |
| Do. from upper part of Bilge to lower edge of Sheerstrake | 12 | 11 | 11 |
| Do. Main Sheerstrake, breadth and thickness | 40 | 13 | 36 |
| Do. of d'bling at Sh'rstrake, & length applied | 30 | 12 | 11 |
| Do. from Main to Upper Deck Sheerstrake | 11 | 11 | 11 |
| Do. Up. Deck Sh'rstrake, breadth and thickness | 50 | 19 | 36 |
| Butt Straps to outside plating, breadth & thickness | 11 | 12 | 11 |
| Lengths of Plating | 8 ft 9 ins | | |
| Shifts of Plating, and Stringers | good | | |
| Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness | 40 | 10 | 49 1/2 |
| Angle Iron on ditto | 6 x 5 x 9 | 4 x 4 x 9 | 9 |
| Tie Plates (fore and aft), outside Hatchways | 15 | 10 | 16 1/2 |
| Diagonal Tie Plates on Beams (No. of Pairs, 4) | 15 | 10 | 16 1/2 |
| Planksheer material and scantling | 10 | 9 | 10 |
| Waterways do. do. | 10 | 9 | 10 |
| Flat of Deck do. do. | 10 | 9 | 10 |
| How fastened to Beams | See Notes | | |
| Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness | 43 1/2 | 14 | 49 1/2 |
| (Is the Stringer Plate attached to the outside plating?) | Yes | | |
| Angle Irons on ditto (No. 2) | 6 x 5 x 10 | 4 x 4 x 9 | 9 |
| Tie Plates, outside Hatchways | 14 | 11 | 16 1/2 |
| Diagonal Tie Plates on Beams (No. of pairs, 6) | 14 | 11 | 16 1/2 |
| Waterways materials and scantlings | 10 x 12 | 10 | 10 |
| Flat of Deck do. do. | 4 x 9 | 10 | 10 |
| How fastened to Beams | See Notes | | |
| Stringer Plates on ends of Lower Deck or Orlop Beams | 33 | 11 | 34 |
| (Is the Stringer Plate attached to the outside plating?) | No. but to | | |
| Angle Irons on ditto (No. one) | 6 x 5 x 10 | 4 x 4 x 9 | 9 |
| Stringer or Tie Plates, outside Hatchways | 14 | 11 | 16 1/2 |
| Flat of Deck | 3 x 9 | 10 | 10 |
| Ceiling between Decks, thickness and material | 2 1/2 | 10 | 10 |
| Do. in hold do. do. | 2 1/2 | 10 | 10 |
| Clamps or Spirketting | 12 | 9 | 12 |
| Main piece of Rudder, diameter at head | 24 | | |
| Do. do. at heel | 32 | | |
| (Can the Rudder be unshipped afloat?) | Yes | | |
| Bulkheads No. 5 Thickness of 8/16 | 7/16 | | |
| Do. Height up to Main Deck | | | |
| Do. How secured to the sides of the ship | Double frames & broad lines | | |
| Do. Size of Vertical Angle Irons | 5 1/2 x 3 1/2 | | |
| Do. Are the outside Plates doubled two spaces of Frames in length? | Yes | | |
| Riveted through plates with (1/8 in.) Rivets, about 1/2 apart. | | | |

IRON 447-0413

Workmanship. Are the butts of plating planed or otherwise fitted? Planed 8608 Iron
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 riveting 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 plate and punched from the faying surfaces? Yes
Are there any rivets which either break into or have been put through the seams or butts of the plating? None

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 riveting, quality of Materials, and if stamped with Maker's name.

State also Length and Diameter of Lower Masts and Bowsprit Fore Mast 92 ft. diam. 31. Main Mast 80 ft. diam. 31. Bowsprit 36 ft. diam. 31.
Bowsprit and Lower Masts of Iron. - Bowsprit in two strakes 1/2" thick, edges worked carvel with a lining piece 10 x 1/2" and double riveted. Butts treble riveted. Fore and Main Masts in four strakes of plates 1/2" thick tapered to 1/2" at head, and 1/2" at heel, edges worked clincher and double riveted, and Butts treble riveted, inside strakes doubled in way of wedging. All other Spars of Pitch Pine.

| N ^o . | SAILS. | CABLES, &c. | Fathoms. | Inches. | Test as per Certificate. | In. req'd per Rule. | Test req'd per Rule. | ANCHORS, &c. | N ^o . | Weight. Ex. Stock. | Test as per Certificate. | W'ght req'd per Rule. | Test req'd per Rule. |
|------------------|-------------------------|---|----------|---------|--------------------------|---------------------|----------------------|---|------------------|--------------------|--------------------------|-----------------------|----------------------|
| | Fore Sails, | Chain | 300 | 1 1/2 | 63.5.0.0 | 1 1/2 | 5979 | Bowers | 1 | 34.0.10 | 31.12.0.0 | 32.0.0 | 30 |
| | Fore Top Sails, | (State Machine where Tested, and name of Superintendent). | | | | | | (State Machine where Tested, and name of Superintendent). | 1 | 34.0.4 | 31.13.1.0 | 32.0.0 | 30 |
| | Fore Topmast Stay Sails | Hempen Stream Cable | 90 | 8 | | 4 | | Stream | 1 | 30.2.10 | 29.1.2.0 | 24.0.0 | 23 |
| | Main Sails, | Hawser | 95 | 1 1/2 | | 1 1/2 | | | | | | | |
| | Main Top Sails, | Towlines | 90 | 9 1/2 | | 11 | | | | | | | |
| | and | Warp | 90 | 9 1/2 | | | | Kedges | 1 | 6.3.2 | | 6.2.0 | |
| | | All of good quality. | 90 | 6 | | | | | | | | 3.1.0 | |

Her Standing and Running Rigging Wire & Hempen sufficient in size and good in quality. She has Two Long Boat Sails Two Life Boats

The present state of the Windlass is efficient Capstan efficient and Rudder efficient Pumps 3 Hand & 4 Steam

Engine Room Skylights. How constructed? Spon Comings 3 ft high How secured in ordinary weather? Screw Bolts through Ce.

What arrangements are there for deadlights in such for bad weather? Tarpaulins and Battens

Coal Bunker Openings. How constructed? Shutes with Show Transoms How are lids secured? Self-locking How high above deck? Flush

Scuppers, &c. What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on Twelve pairs of Open ports besides Sea ports of Scuppers 12 x 5" inside

Cargo Hatchways. How formed? Spon Comings 10" thick State size Fore Hatch 4.0 x 8.0 After Hatch

If of extraordinary size, state how framed and secured? None

What arrangement for shifting beams? None

Hatches, themselves, whether strong and efficient? Yes Main Hatchways. State size 10.6 x 8.0

| | | | | |
|--|--------------------|------|--|--------------------------------|
| Order for Special Survey No. <u>see Secretary's letter</u> | DATES of | 1st. | On the several parts of the frame, when in place, and before the plating was wrought | <u>Specially</u> |
| Date <u>20th October 1868</u> | Surveys held | 2nd. | On the plating during the progress of riveting | <u>Surveyed while building</u> |
| Order for Ordinary Survey No. <u>✓</u> | while building | 3rd. | When the beams were in and fastened, and before the decks were laid | <u>from 24th June 1868</u> |
| Date <u>✓</u> | as per | 4th. | When the ship was complete, and before the plating was finally coated or cemented | <u>to 29th September 1870</u> |
| No. <u>9</u> | in builder's yard. | 5th. | After the ship was launched and equipped | |

General Remarks, Visits. - 24th June, 19th & 27th August, 26th October, 28th November, & 15th December 1868, 12th January, 12th February, 20th March, 5th April, 14th May, & 9th August 1869, & 9th March, 9th & 15th 1870, & 24th September 1870.

This Vessel is not in all respects in compliance with the new Rules, having been designed and constructed to class on the old Rules for the A class, to which she is eligible, except in respect to a Forecastle being fitted on the Spar Deck: the deficiencies under the new Rules consist in the Side Anticostal Keelson not being attached to the Outside plating, two strakes of Bilge plates are not doubled, and the Stringer Plate, and Sheerstrake No Upper Deck are double instead of treble riveted: these deficiencies are however compensated for by the very heavy scantlings of the Vessel.

The classification of the Vessel I respectfully leave to the consideration of the Committee.

In what manner are the surfaces preserved from oxidation? Inside Cemented in place & painted above with three coats of Paint. Outside Five Coats on Bottom including one of Patent Composition, and three coats of Paint above.

I am of opinion this Vessel should be Classed

The amount of the Entry Fee£ 5 : 0 : 0 is received by me, not paid

Travelling Expenses Special£ 46 : 8 : 6 Paid 18th Jan 1871

(if any). Certificate£ 81 : 8 : 6 Edmund Roachman

Committee's Minute 23rd December 1870

Character assigned



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