

IRON SHIP. 1872

No. 11600 Survey held at *Sunderland* Date, First Survey *August 26th 1876* Last Survey *March 19th 1878*

On the *Screw Steamer "Walton"*

Master *Not appointed*

TONNAGE under Tonnage Deck } *878.14*

Ditto of Third, Spar, or Awning Deck. } *-*

Ditto of Poop, or Raised Qr. Dk. } *87.68*

Ditto of Houses on Deck } *69.17*

Ditto of Forecastle Hatch } *19.21*

Gross Tonnage } *1068.46*

Less Crew Space } *35.28*

Less Engine Room } *341.97*

Register Tonnage as out on Beam } *691.41*

ONE OR TWO DECKED, ~~THREE DECKED~~ VESSEL.

~~SPAR OR AWNING DECKED VESSEL.~~

HALF BREADTH (moulded) *15.41* Feet.

DEPTH from upper part of Keel to top of Upper Deck Beam *19.22*

DEPTH of Half Midship Frame (as per Rule) *31.33*

NUMBER *65.86*

1st NUMBER, if a THREE-DECKED VESSEL [deduct 7 feet] *216.75*

LENGTH *142.76*

PROPORTIONS—Breadths to Length *7*

Depths to Length—Upper Deck to Keel *11*

Main Deck ditto *✓*

Built at *Sunderland*

When built *1876* Launched *31 Jan^y 1877*

By whom built *Messrs. Short Brothers*

Owners *R. B. Avery & Howard of North Shields*

Port belonging to *London*

Destined Voyage *Not fixed*

If Surveyed while Building, Afloat, & in Dry Dock.

Official Number

| LENGTH | Feet. | Inches. | BREADTH— | Feet. | Inches. | DEPTH top of Floors to Upper | Feet. | Inches. | Power of | Horse. | No. of Decks with flat laid | No. of Tiers of Beams |
|-----------------------------|------------|----------|-------------|-----------|-----------|------------------------------|-----------|----------|-------------|-----------|-----------------------------|-----------------------|
| on deck as per Rule ... | <i>216</i> | <i>9</i> | Moulded ... | <i>30</i> | <i>10</i> | Deck Beams ... | <i>17</i> | <i>5</i> | Engines ... | <i>99</i> | <i>two</i> | <i>two</i> |
| Do. do. Main Deck Beams ... | | | | | | | | | | | | |

Dimensions of Ship per Register, length *218.5* breadth, *31. -* depth, *17.4*

| | Inches in Ship. | Inches per Rule. | | Inches in Ship. | Inches per Rule. |
|--|-------------------------|----------------------|-------------------------------------|----------------------|----------------------|
| KEEL, depth and thickness ... | <i>8 x 2 3/8</i> | <i>8 x 2 3/8</i> | STEM, moulding and thickness ... | <i>7 1/4 x 2 3/8</i> | <i>7 1/4 x 2 3/8</i> |
| STERN-POST for Rudder do. do. | <i>8 x 3 1/2</i> | <i>7 1/4 x 4 3/4</i> | for Propeller ... | <i>8 x 4 1/2</i> | <i>23 in</i> |
| Distance of Frames from moulding edge to moulding edge, all fore and aft ... | <i>23"</i> | (Class <i>100A</i>) | | | |
| FRAMES, Angle Iron, for 2/3 length amidships ... | <i>4 3 7</i> | <i>4 3 7</i> | Do. for 1/3 at each end ... | <i>4 3 6</i> | <i>4 3 6</i> |
| REVERSED FRAMES, Angle Iron ... | <i>3 3 6</i> | <i>3 3 6</i> | | | |
| FLOORS, depth and thickness of Floor Plate at mid line for half length amidships ... | <i>19 1/2</i> | <i>8.9</i> | thickness at the ends of vessel ... | <i>19 1/2</i> | <i>8</i> |
| depth at 3/4 the half-bdth. as per Rule ... | <i>9 3/4</i> | <i>7</i> | height extended at the Bilges ... | <i>9 3/4</i> | <i>7</i> |
| BEAMS, Upper, Spar, or Awning Deck Single or double Ang. Iron, Plate or Tee Bulb Iron ... | <i>5 3 7</i> | <i>5 3 7</i> | | | |
| Single or double Angle Iron on Upper edge ... | <i>on every frame</i> | | | | |
| Average space ... | | | | | |
| BEAMS, Main, or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron ... | | | | | |
| Single or double Angle Iron, on Upper Edge ... | | | | | |
| Average space ... | | | | | |
| BEAMS, Lower Deck, Hold, or Outboard Single or d'ble Ang. Iron, Plate or Tee Bulb Iron ... | <i>8 1/2</i> | <i>8</i> | | | |
| Single or double Angle Iron on Upper Edge ... | <i>4 3 7</i> | <i>4 3 7</i> | | | |
| Average space ... | <i>every 10th frame</i> | | | | |
| KEELSONS Centre line, single or double plate, or Intercoastal, Plates ... | <i>14 11</i> | <i>14 11</i> | | | |
| " Rider Plate ... | <i>10 3/4 11</i> | <i>10 3/4 11</i> | | | |
| " Bulb Plate to Intercoastal Keelson ... | | | | | |
| " Angle Irons ... | <i>5 3 1/2 7</i> | <i>5 3 1/2 7</i> | | | |
| " Double Angle Iron Side Keelson ... | <i>5 3 1/2 7</i> | <i>5 3 1/2 7</i> | | | |
| " Side Intercoastal Plate <i>Wash Plates</i> ... | <i>6</i> | <i>6</i> | | | |
| " do. Angle Irons ... | | | | | |
| " Attached to outside plating with angle iron ... | | | | | |
| BILGE Angle Irons ... | <i>5 3 1/2 7</i> | <i>5 3 1/2 7</i> | | | |
| " do. Bulb Iron ... | <i>7 1/2 7</i> | <i>7 1/2 7</i> | | | |
| " do. Intercoastal plates riveted to plating for length ... | | | | | |
| BILGE STRINGER Angle Irons ... | <i>5 3 1/2 7</i> | <i>5 3 1/2 7</i> | | | |
| Intercoastal plates riveted to plating for length ... | | | | | |
| SIDE STRINGER Angle Irons ... | | | | | |

| | Inches in Ship. | 16ths in Ship. | Inches per Rule. | 16ths per Rule. |
|--|---------------------------------|----------------|--------------------------|-----------------|
| Flat Keel Plates, breadth and thickness ... | <i>34</i> | <i>10</i> | <i>34</i> | <i>10</i> |
| PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied <i>1/2 length</i> ... | <i>10</i> | <i>10</i> | <i>10</i> | <i>10</i> |
| fm up. part of Bilge to lr. edge of Sh'rstrake ... | <i>9</i> | <i>9</i> | <i>9</i> | <i>9</i> |
| Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake ... | <i>36</i> | <i>12</i> | <i>36</i> | <i>12</i> |
| Up. or Spar Dk Sh'rstrake, brdth & thickness ... | <i>9 1/2 plates for 20 feet</i> | | | |
| Butt Straps to outside plating, breadth & thickness ... | <i>10 1/2</i> | <i>18 5/8</i> | <i>13 9/16</i> | <i>8 5/16</i> |
| Lengths of Plating ... | <i>5 spaces</i> | | | |
| Shifts of Plating, and Stringers ... | <i>2 spaces</i> | | | |
| Gunwale Plate on ends of <i>Awning Spar</i> ... | <i>31</i> | <i>9</i> | <i>31</i> | <i>9</i> |
| Upper Deck Beams, breadth and thickness ... | <i>5 x 3 1/2</i> | <i>7</i> | <i>5 x 3 1/2</i> | <i>7</i> |
| Angle Iron on ditto ... | <i>Iron deck 7 x 6 1/2</i> | | | |
| Tie Plates fore and aft, outside Hatchways ... | | | | |
| Diagonal Tie Plates on Beams No. of Pairs ... | | | | |
| Planksheer material and scantling ... | <i>Iron deck</i> | | | |
| Waterways do. do. ... | <i>7 x 6</i> | | <i>7 x 6</i> | |
| Flat of Upper Deck do. do. ... | <i>Riveted</i> | | | |
| How fastened to Beams ... | | | | |
| Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness ... | | | | |
| Is the Stringer Plate attached to the outside plating? ... | | | | |
| Angle Irons on ditto, No. ... | | | | |
| Tie Plates, outside Hatchways ... | | | | |
| Diagonal Tie Plates on Beams, No. of pairs ... | | | | |
| Waterways materials and scantlings ... | | | | |
| Flat of Middle Deck do. do. ... | | | | |
| How fastened to Beams ... | | | | |
| Stringer Plates on ends of <i>Lower Deck, Hold</i> ... | <i>29 8</i> | | <i>29 8</i> | |
| Drop Beams ... | | | | |
| Is the Stringer Plate attached to the outside plating? <i>Yes</i> ... | <i>3 1/2 x 3 1/2 x 8</i> | | <i>3 1/2 x 3 1/2 x 8</i> | |
| Angle Irons on ditto, No. <i>3</i> ... | <i>5 x 3 1/2 x 7</i> | | <i>5 x 3 1/2 x 7</i> | |
| Stringer or Tie Plates, outside Hatchways ... | | | | |
| Flat of Lower Deck ... | | | | |
| Ceiling betwixt Decks, thickness and material ... | <i>2 3/8</i> | | <i>Baltic pine</i> | |
| in hold do. do. ... | <i>2 1/2</i> | | | |
| Main piece of Rudder, diameter at head ... | <i>5 1/4</i> | | <i>5 1/4</i> | |
| do. at heel ... | <i>3</i> | | <i>3</i> | |
| Can the Rudder be unshipped afloat? <i>Yes</i> ... | | | | |
| Bulkheads No. <i>4</i> Thickness of <i>5/16 & 3/16</i> ... | | | | |
| Height up <i>Upper deck</i> , after one to cabin flat ... | | | | |
| How secured to sides of ship <i>Between double frames</i> ... | | | | |
| Size of Vertical Angle Irons <i>3 x 3 x 9/16</i> and distance apart <i>30 ins.</i> ... | | | | |
| Are the outside Plates doubled two spaces of Frames in length? <i>Yes</i> ... | | | | |

Transoms, material. *Knight heads. Name Timbers. Iron*

Windlass *Harfield's patent* Pall Bitt *Iron*

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

The REVERSED ANGLE IRONS on floors and frames extend *near* middle line to *Hold Beam Stringer* 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 1/16* 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 *3* Strakes at Bilge for *1/2* length, treble riveted with Butt Straps *1/16* thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double or 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 & single riveted. Upper Sheerstrake, double or single riveted.

Butts of Main Sheerstrake, treble riveted for *1/2* length amidships. Butts of Upper or Spar Sheerstrake, treble riveted *length amidships.*

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

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

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

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

Beams of the various Decks, how secured to the sides? *Turned down ends and braced knees, riveted to frames & stringer beams* No. of Breasthooks, *3* Crutches, *30*

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Angles & Bulbs by Messrs. C. G. Johnson & Co. of part Stockton makeable*

Manufacturer's name or trade mark, *Plates by C. G. Johnson & Co. of part Stockton makeable*

The above is a correct description.

Builder's Signature, *Short Brothers* Surveyor's Signature, *John ...*

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed* 18121 *Im*
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 very well*
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 of *wood* & 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

| NUMBER for EQUIPMENT 15400 | | Fathoms. | Inches. | Test per Certificate. | Length & Size req'd pr Rule. | Test req'd per Rule. | ANCHORS. | N ^o . | Weight. Ex. Stock. | Test per Certificate | W'ght req'd per Rule. | Test req'd per Rule. |
|----------------------------|-------------------------|---|---------|-----------------------|------------------------------|----------------------|----------|---|--------------------|----------------------|-----------------------|----------------------|
| SAILS. | CABLES, &c. | 240 | 1 1/2 | 405/10 | 240-1 1/2 | 405/10 | Bowers | 1 | 21.2.14 | 22.1.14 | 21.0.0 | 21 1/2 |
| | Chain | marked R.W.C.P.T. dated Dec 1/76 | | | | | | 1 | 21.1.7 | 21.7.0.21 | | |
| | Fore Sails, | 3 hanks of each 15 fathoms tested to breaking | | | | | | 1 | 18.1.14 | 19.6.2.7 | 18.0.0 | 19.0.0.0 |
| | Fore Top Sails, | chain 58 1/10 tons. signed J. Hartness | | | | | | marked R.W.C.P.T. 1876 date of certificate January 12, 15 & 17 1877 signed J. Hartness superintendent | | | | |
| | Fore Topmast Stay Sails | Hmpn Strng Cbl | 80 | 6 | | | Stream | 1 | 9.0.0 | | 9.0.0 | |
| | Main Sails, | Hawser | 60 | 7 1/8 | | | Kedges | 1 | 4.2.14 | | 4.2.0 | |
| Main Top Sails, | Towlines | ... | 80 | 7 1/8 | | | | | | | | |
| | Warp | ... | 80 | 8 1/2 | | | | | | | | |
| and quality good | | | 80 | 4 1/2 | | | | | | | | |

Standing and Running Rigging *Wire & hemp* sufficient in size and *good* in quality. She has *one* Long Boat and *others*
The Windlass is *good* Capstan *good* and Rudder *good* Pumps *Metal & good*
Engine Room Skylights.—How constructed? *Solid framing* How secured in ordinary weather? *Solid shutters with thick circular glass*
What arrangements for deadlights in bad weather? *Leaky Rubber House*
Coal Bunker Openings.—How constructed? *Cast iron* How are lids secured? *Solid Hatches and tarpaulin* Height above deck? *7 ins*
Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *6 scuppers and 6 ports on each side*
Cargo Hatchways.—How formed? *Iron plate coverings & Headledges*
State size Main Hatch *19' 3" x 12' 0" x 39" high* Forehatch *13' 6" x 12' 0" x 39" high* Quarterhatch *15' 4" x 12' 0" x 30" high*
If of extraordinary size, state how framed and secured? *a strong shifting beam in each Hatch*
What arrangement for shifting beams?
Hatches, If strong and efficient? *Yes, 2 1/2 solid fir.*

| | | | | |
|--|---|---|---|--|
| Order for Special Survey No. <i>2644</i> | DATES of Surveys held while building as per Section 18. | 1st. On the several parts of the frame, when in place, and before the plating was wrought | Built under S.P. and surveyed 1876 August 26 Sept 7 11 14 18 19 25 | |
| Date <i>20 Sept 1876</i> | | 2nd. On the plating during the process of riveting | 28 October 17 31 Nov 1 13 16 17 21 22 23 24 27 28 Dec 5 7 11 12 14 15 17 22 23 25 27 28 30 31 | |
| Order for Ordinary Survey No. <i></i> | | 3rd. When the beams were in and fastened, and before the decks were laid.... | 36 9 11 12 16 20 23 24 30 Feb 16 9 12 16 22 27 March 13 5 8 9 12 13 16 17 | |
| Date <i></i> | | 4th. When the ship was complete, and before the plating was finally coated or cemented.. | | |
| No. <i>77</i> in builder's yard. | | 5th. After the ship was launched and equipped | | |

General Remarks (State quality of workmanship, &c.) *This vessel is constructed in accordance with the rules, and the scantlings set forth upon the tracing of Midships Section attached; She has a raised quarter deck about 84 feet in length; a Bridge House about 40 feet in length, and a Dunk Forecastle about 25 feet in length. The fore peak is constructed for a Ballast tank with an iron platform at the height of the Hold Beams; The flat of the Dunk Forecastle and also the deck above are of iron. A Ballast tank is fitted in the fore hold, extending from the fore Bulkhead of Engine Room forward about 63 feet, and one in the after hold extending from the after Bulkhead of Engine, aft, to within 2 frame spaces of the after Bulkhead about 63 feet in length; The after compartment is fitted with an iron platform at the height of the Hold Beams with a view to being used as a Ballast tank. The material and workmanship being generally of a good description. Each of the Ballast tanks have been tested to a Head of water equal to the load line of the ship. See letters dated 5/8/76 and 13/1/77*
State if one, two, or three, decked vessel, or if open, or running decked; and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside *Portland Cement to upper* Outside *3 coats of paint*
I am of opinion this Vessel should be Classed **100A* Turn of Rigs and paint above

The amount of the Entry Fee ... £ *5* : - : - is received by me, *M.H.*
Special ... £ *50* : *16* : - *2nd March 1877*
Certificate ... - : - : -
Travelling Expenses, if any, £
23rd March 1877
100A
James Lubbock
It is submitted this vessel is eligible to be classed as recommended 100A Lloyd's Register