

IRON SHIPS.

No. *9769* Survey held at *Sunderland* Date *June 26th to Novem. 18th* 1869
on the *Iron Steamer "Pelam"* Master *A Bone*

Tonnage under tonnage deck 693.70 Built at Sunderland When built 1869 Launched 7th Octr 1869.
 Ditto of Liverpool House 44.40
 Ditto of poop or spar deck 54.60
 Ditto of engine room 792.70
 Ditto of crew space 29.56
 Total Register tonnage 763.34
 Engine Room 463.34
 Tonnage cut on Beam 668.23
 Surveyed while Building, Afloat, or in Dry Dock While Building.

| Feet. | | Inches. | | Feet. | | Inches. | | Feet. | | Inches. | | Horse. | | N ^o . of Decks | |
|--|--|------------------|--|------------------|--|--|--|---|--|---------------------------------------|--|------------------------|--|---------------------------------------|--|
| Length aloft | | — | | Extreme Breadth | | — | | Depth from top of Upper Deck Beam to top of Floor | | — | | Power of Engines | | — | |
| Dimensions of Ship per Register, length 204.7 breadth 29.0 depth 16.8 | | | | | | | | | | | | | | | |
| Keel, if bar iron, depth and thickness | | 7 1/4 x 2 3/4 | | 7 1/4 x 2 3/4 | | Plates in Garboard Strakes, breadth and thickness | | 30 | | 10 | | 30 | | 10 | |
| ,, if plate iron, breadth and thickness | | 7 1/4 x 2 3/4 | | 7 x 2 3/4 | | Ditto from Garboard to upper part of Bilges.. | | 9 | | 9 | | 9 | | 9 | |
| ,, if bar iron, moulding and thickness | | 7 1/4 x 2 3/4 | | 7 x 2 3/4 | | ,, from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold | | 8 | | 8 | | 8 | | 8 | |
| ,, if plate iron, breadth and thickness | | 9 1/2 x 4 1/4 | | 40 duplex | | ,, from 3/4ths depth of Hold to lower edge of Sheerstrake | | 7 1/2 | | 7 1/2 | | 7 1/2 | | 7 1/2 | |
| tern-post, if bar iron, moulding and thickness | | 21 | | 21 | | ,, Sheerstrake, breadth and thickness | | 33 | | 10 1/2 | | 30 | | 9 3/4 length | |
| ,, if plate iron, breadth and thickness | | 21 | | 21 | | Butt Straps to outside plating, breadth and thickness | | 9 x 29 1/2 | | 10 | | 7 1/2 | | 9 1/2 | |
| Distance of Frames from moulding edge to moulding edge, all fore and aft | | 4 | | 3 | | Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness | | 29 | | 9 | | 29 x 4 1/2 | | 9 | |
| Frames, Size of Angle Iron, single or double | | 4 | | 3 | | Angle Iron on ditto | | 21 | | 9 | | 21 x 4 1/2 | | 9 | |
| ,, Reversed Iron, # to every frame, and every alternate frame. to upper turn of Bilges | | 4 | | 3 | | Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways | | 10 1/2 | | 8 | | 10 1/2 | | 8 | |
| Floors, depth and thickness of Floor Plate at mid line | | 18 1/4 | | 8 | | Diagonal Tie Plates on ditto | | 10 1/2 | | 8 | | 10 1/2 | | 8 | |
| ,, Ditto ditto at Bilge Keelson | | 10 | | 8 | | Planksheer, materials and scantlings | | Gutter | | funnel | | Gutter | | funnel | |
| ,, Size of Reversed Angle Iron, and No. 162 at top of Floor Plate | | 3 | | 2 3/4 | | Waterway ditto ditto | | 3 1/2 | | Y.P. | | 3 1/2 | | Y.P. | |
| Beams, Deck (N ^o 53) double Angle Iron, Plate, Tee, or Bulb Iron | | 2 3/4 | | 2 3/4 | | Flat of Upper Deck, thickness and material | | 3 1/2 | | Y.P. | | 3 1/2 | | Y.P. | |
| ,, double or single Angle Iron, on upper edge | | 2 3/4 | | 2 3/4 | | ,, how fastened to Beams | | iron nut & screw bolts | | iron nut & screw bolts | | iron nut & screw bolts | | iron nut & screw bolts | |
| ,, average space between | | alternate frames | | alternate frames | | Ceiling betwixt Decks and in Hold, thickness and material | | 2 1/2 | | Red Pine to upper turn of bilges only | | 2 1/2 | | Red Pine to upper turn of bilges only | |
| Hold, or Lower Deck (N ^o 29) double Angle, Tee, Plate, or Bulb Iron | | 7 | | 7 | | Clamps or Spirketting ditto | | — | | — | | — | | — | |
| ,, double or single Angle Iron, on upper edge | | 3 | | 2 3/4 | | Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness | | 23 | | 9 | | 21 | | 9 | |
| ,, average space between | | 3/6 and 7/10 | | 3/6 and 7/10 | | Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams | | 4 1/2 x 3 1/2 | | x 7 | | 4 1/2 x 3 1/2 | | x 7 | |
| ,, addle, sided and moulded, thickness of Plate size of Angle Iron | | 3 1/6 | | 3 1/6 | | Stringers in Hold | | 3 1/2 | | x 5 | | x 8 | | 4 1/2 x 3 1/2 x 7 | |
| Engine | | — | | — | | Flat of Lower Deck, thickness and material | | 5 1/2 | | 5 | | 5 | | 5 | |
| on, single or double plate, box, or intercostal | | — | | — | | Main piece of Rudder, diameter at head | | 3 | | 3 | | 3 | | 3 | |
| Size of Plates | | 13 | | 11 | | ,, ,, ,, at heel | | — | | — | | — | | — | |
| Size of Angle Irons | | 3 1/2 | | 5 | | (Can the Rudder be unshipped afloat) | | Yes | | Yes | | Yes | | Yes | |
| Side, single or double, plate, box, or intercostal | | — | | — | | Bulkheads, N ^o 4 Thickness of | | 6/16 | | 6/16 | | 6/16 | | 6/16 | |
| Bilge (N ^o one) at each Bilge, single or double, plate, or box | | 3 1/2 | | 5 | | ,, Height up to Upper Deck | | — | | — | | — | | — | |
| Bulb & plain plate in 1/2 length | | — | | — | | ,, how secured to the sides of the ship | | 3 x 2 3/4 x 6 | | 3 x 2 3/4 x 6 | | 3 x 2 3/4 x 6 | | 3 x 2 3/4 x 6 | |
| Boms, material Iron or, if none, in what manner compensated for. | | Iron | | Iron | | ,, size of vertical angle irons and their distance apart | | 2/6 | | 2/6 | | 2/6 | | 2/6 | |
| t-heads, and Hawse Timbers | | — | | — | | | | | | | | | | | |

frames extend in one length from Keel to Summals rivetted through plates with ($\frac{3}{4}$ in.) rivets, about ($6\frac{1}{2}$) apart.
Reverse angle irons on the floors extend in one length ^{near} ~~across~~ the middle line from to Upper turn of Bilge on
y, frames on the frames, and, on from alternate frames to summals

Garboard, double ~~or~~ with 1/16 Rivets rivetted to keel, double ~~or~~ Butt straps at upper edge, with rivets ($\frac{3}{4}$ ins.) diameter, averaging 2 1/2 apart.

Edges from Garboards to upper part of bilge, worked clencher, double ~~or single~~ rivetted; with rivets ($\frac{3}{4}$ in.) diameter, averaging (3 ins.) apart.

Butts from Keel to turn of bilge, worked carvel with butt straps ($\frac{2 \text{ and } 10}{16}$) thick, double ~~or single~~ rivetted; with rivets ($\frac{3}{4}$ in.) diameter, averaging (3 ins.) apart.

Do the butt straps lap over and rivet through the lands of the strake below? *Yes as in plates over*

Edges from bilge to sheerstrake, worked ~~carvel with a lining piece () thick, or clencher, double or~~ single rivetted; with rivets $\frac{1}{2}$ in. diameter. *at inner strakes only*
averaging $\frac{1}{2}$ in.) apart. Do the butt straps lap over and rivet through the lands of the strake below?

Edges of Sheerstrake, double ~~or single~~ rivetted? At upper edge double At lower edge double
Butts from bilge to planksheers, worked carvel with butt straps ($\frac{1.2.3.11.}{16}$) thick, double ~~or single~~ rivetted; with rivets ($\frac{1.2.4.}{16}$ in.) diameter, averaging ($\frac{2.5.7.6.5.}{1}$ ins.) apart. Breadth of laps in double rivetting ($\frac{4.2.3.5.}{1}$) Breadth of laps in single rivetting ($\frac{2.1}{4}$)

Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? Double
 Sheer, how secured to the plating of the sides (Explain by sketch) Butter Runners

[illegible]

Saddle " " Hil No. of breasthooks 3 crutches 2

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

Angles, *Wheeler and Co.* Teas, *Connel*
 Bulls and Stringer angles, *Loch, Wilson & Bell*; and *Palmer Shipbuilding Co.*

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

Builder's Signature For James Lamy Surveyor's Signature

John Ross

Surveyor's Signature

No. of breasthooks 3 crutches 2

side Plating, &c. ? © 2010

ates, Consett Iron Co.
Bell; and part Palmer Shipbuilding Co.

Ex. 1. 139.

Joseph Allen

Foundation

Workmanship. Are the lands or laps of the clenchwork 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? *Not filled*

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? *There are a few*

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.

Testing Certificate of Chains and Anchors were produced issued from the Sunderland Testing house, on the Certificate of Chains it is stated that a portion of the Chain has proved to the breaking strain and shored a margin of 44.1 per cent beyond Admty. Test for 1 1/2% Chain Signed J Hartnoff

She has SAILS.

CABLES. &c.

ANCHORS, and their weights.

| No. | | Fathoms. | Inches. | Tested to. Tons. | | No. | Weight. Ex. Stock | Tested to. Tons. |
|-----|--------------------------|---|---------|---------------------|----|----------------------------|----------------------|---------------------|
| | Fore Sails, | Chain <i>270 = 17/16</i> | 270 | 17/16 | 34 | Bowers, | 1 | 17.2.21 18.15.17 |
| | Fore Top Sails, | Chain <i>Hemp</i> Stream Cable | 40 | 15/16 | | <i>Shroud 2 = 18 Cat</i> | 1 | 16.3.14 18.2.3 |
| | Fore Topmast Stay Sails, | Hawser <i>each</i> | 90 | 62.52.42 | | <i>Third = 15.1.6</i> | 1 | 14.3.21 16.10.0 |
| | Main Sails, | Towlines | 60 | 10 | | Stream, <i>8.0.0</i> | 1 | 7.0.10 |
| | Main Top Sails, | Warp | 40 | 4 | | Kedges, <i>4.0.0</i> | | 3.1.25 |
| | | All of <i>Good</i> quality. | | | | | | 1.3.0 |


Her Standing and Running Rigging Galvane & Hemp sufficient in size and good in quality.

She has one (life) Long Boat and two others

The present state of the Windlass is { *Capstan* *on 2.0* and Rudder *good* Pumps *2 in addition to Engine*

| | | | | |
|---------------------------|----------------|------|--|--|
| Order for Special Survey | DATES of | 1st. | On the several parts of the frame, when in place, and before the plating was wrought | <i>Built under 23</i> |
| No. <u> </u> | Surveys held | 2nd. | On the plating during the progress of rivetting | <i>2 surveys 1869 June 26-30</i> |
| Date <u> </u> | while building | 3rd. | When the beams were in and fastened, and before the decks were laid | <i>July 5-6-9-15-17-22-28 Aug 2-24</i> |
| Order for Ordinary Survey | as per | 4th. | When the ship was complete, and before the plating was finally coated | <i>Sept 9-20 Oct 1-27 Nov 6-10-13-15</i> |
| No. <u> </u> | Section 18. | 5th. | After the ship was launched | |
| Date <u> </u> | | | | |

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

General Remarks, This Vessel is Sister Ship to "Lady Clive" Reg^d. No 972 P her length exceeds seven breaths, and twelve depths; and in order that she may conform to the Rules for the above excessive proportions the stringer plate on ends of upper deck beams should have been $\frac{1}{16}$ " thick for half length amidships and $\frac{9}{16}$ " at the ends; it is of the latter thickness all fore and aft; the Sheerstrake is however 3^{rd} " wide throughout, and $\frac{1}{16}$ " thicker ^{at ends} than required, which perhaps may be considered as compensation for the above deficiency; there is also a bulb bar brought on the side of the bilge keelson thus  (instead of between) and for half the length amidships, except in the water ballast tank where a nautical Mark plate is substituted in lieu thereof.

The stringers in hold are $\frac{1}{16}$ thicker than required by Rule. S. L. + a little better to be a little better.

ing Rule. She has two water ballast tanks one before the Engine Room, and one abaft, the latter extending to after part of Ship.

The Rudder is forged with the main piece in one
but there is no stay fitted therein.

but there is no clay filled therein. The Engine Room hatch is protected by a Bridge with iron bulkheads around it, conforming to the Rules.

The whole of the Anchors and Cables are light
Please See letter on this Subject, appended.

| | | |
|---|---------|--------------------------------------|
| In what manner are the surfaces preserved from oxidation? | Inside | Cement to the Ridges; paint above. |
| | Ditto | ditto |
| | Outside | Bottom Lead Composition; paint above |

I am of opinion this Vessel should be Classed

The amount of the Fee£ 5 : 0 : 0 is received by me,

Special £ 5 : 5 : "

Certificate (if required)£ " : 5 : "

Committee's Minute *7th January 1860*

Character assigned

me, and as the Anchors and Cable
me, are light respectfully call
the Committee's attention thereto
Joseph Klee.

I am of opinion the effect of
this second manner is visible for
classification as recommended
above. The Committee will
please observe Mr. Tuckers
the Anders and Cables. The other