

# IRON SHIP.

No. 3903 Survey held at *Stockton*  
On the *Screw Steamer "Osprey"*

Date, First Survey *13 March*

Last Survey *2nd Nov. 1877*

Master *J. W. Watts*

TONNAGE under  
Tonnage Deck *885.55*  
Ditto of Third, Spar, or Awning Deck *.44*  
Ditto of Poop, or Raised Or. Dk. *135.65*  
Ditto of Houses on Deck *27.26*  
Ditto of Forecastle *46.33*  
Gross Tonnage *1095.23*  
Less Crew Space *35.16*  
Less Engine Room *1060.07*  
Less Engine Room *421.66*  
Register Tonnage as cut on Beam *638.41*

ONE, OR TWO DECKED, THREE DECKED VESSEL.  
SPAR, OR AWNING-DECKED VESSEL.  
HALF BREADTH (moulded) *15-5 1/2*  
DEPTH from upper part of Keel to top of Upper Deck Beams *18-6 1/2*  
GIRTH of Half Midship Frame (as per Rule) *11*  
1st NUMBER *23-11*  
1st NUMBER, if a THREE DECKED VESSEL *23-11*  
LENGTH *238-9*  
2nd NUMBER *15260*  
PROPORTIONS—Breadths to Length *7.7*  
Depths to Length—Upper Deck to Keel *12.8*  
Main Deck ditto

Built at *Stockton*  
When built *1877* Launched *8th Sept 1877*  
By whom built *Pearse & Co*  
Owners *General Steam Navigation Co*  
Port belonging to *London*  
Destined Voyage  
If Surveyed while Building, Afloat, or in Dry Dock, while building and afloat

LENGTH on deck as per Rule *238* Feet. *9* Inches. BREADTH—Moulded... *30* Feet. *11* Inches. DEPTH top of Floors to Upper Deck Beams *17* Feet. *0* Inches. Power of Engines *250* Horse. No. of Decks with flat laid *one* No. of Tiers of Beams *two*

Dimensions of Ship per Register, length, *240.2* breadth, *31.15* depth, *17.0*

|  | Inches in Ship.                      | Inches per Rule.                     |
|--|--------------------------------------|--------------------------------------|
| KEEL, depth and thickness  | $8 \times 2 \frac{3}{8}$             | $8 \times 2 \frac{3}{8}$             |
| STEM, moulding and thickness   | $7 \frac{1}{2} \times 2 \frac{3}{8}$ | $7 \frac{1}{2} \times 2 \frac{3}{8}$ |
| STERN-POST for Rudder do. do.  | $7 \frac{3}{4} \times 4 \frac{3}{4}$ | $7 \frac{1}{2} \times 4 \frac{3}{4}$ |
| for Propeller  | $7 \frac{3}{4} \times 4 \frac{3}{4}$ | $7 \frac{1}{2} \times 4 \frac{3}{4}$ |
| Distance of Frames from moulding edge to moulding edge, all fore and aft             | <i>23</i>                            | <i>23</i>                            |
| FRAMES, Angle Iron, for $\frac{3}{4}$ length amidships                               | $4 \times 3$                         | $4 \times 3$                         |
| Do. for $\frac{1}{2}$ at each end  | $4 \times 3$                         | $4 \times 3$                         |
| REVERSED FRAMES, Angle Iron  | $3 \times 3$                         | $3 \times 3$                         |
| FLOORS, depth and thickness of Floor Plate at mid line for half length amidships     | $18 \frac{1}{2}$                     | $8 \frac{1}{6}$                      |
| thickness at the ends of vessel  | $7 \frac{1}{6}$                      | $7 \frac{1}{6}$                      |
| depth at $\frac{3}{4}$ the half-bdth. as per Rule                                    | $9 \frac{1}{4}$                      | $9 \frac{1}{4}$                      |
| height extended at the Bilges  | $37$                                 | $37$                                 |
| BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron | $7 \frac{1}{2}$                      | $7 \frac{1}{2}$                      |
| Single or double Angle Iron on Upper edge  | $3 \times 3$                         | $3 \times 3$                         |
| Average space  | $46$                                 | $46$                                 |
| BEAMS, Main, or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron        | $6 \frac{1}{2}$                      | $7 \frac{1}{2}$                      |
| Single or double Angle Iron on Upper Edge  | $2 \frac{3}{4} \times 2 \frac{3}{4}$ | $3 \times 3$                         |
| Average space  | $46$                                 | $22 \frac{3}{4}$                     |
| BEAMS, Lower Deck, Hold, or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron  | $6 \frac{1}{2}$                      | $7 \frac{1}{2}$                      |
| Single or double Angle Iron on Upper Edge  | $2 \frac{3}{4} \times 2 \frac{3}{4}$ | $3 \times 3$                         |
| Average space  | $46$                                 | $22 \frac{3}{4}$                     |
| KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates           | $15$                                 | $15$                                 |
| Rider Plate  | $10 \frac{3}{4}$                     | $10 \frac{3}{4}$                     |
| Bulb Plate to Intercoastal Keelson   | $10 \frac{3}{4}$                     | $10 \frac{3}{4}$                     |
| Angle Irons  | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| Double Angle Iron Side Keelson   | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| Side Intercoastal Plate wash. plates   | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| do. Angle Irons  | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| Attached to outside plating with angle iron  | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| BILGE Angle Irons  | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| do. Bulb Iron  | $9 \frac{1}{2}$                      | $7 \frac{1}{2}$                      |
| do. Intercoastal plates riveted to plating for length                                | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| BILGE STRINGER Angle Irons   | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| Intercoastal plates riveted to plating for length                                    | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |
| SIDE STRINGER Angle Irons  | $5 \times 3 \frac{1}{2}$             | $5 \times 3 \frac{1}{2}$             |

|   | Inches. In Ship.  | 16ths. In Ship. | Inches. per Rule.   | 16ths. per Rule. |
|---|---|-----------------|---|------------------|
| Flat Keel Plates, breadth and thickness   | $34 \frac{1}{2}$  | $\frac{11}{16}$ | $34$  | $\frac{11}{16}$  |
| PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied $\frac{1}{6}$ for $\frac{1}{2}$ length | $2 \frac{1}{2}$   | $\frac{11}{16}$ | $2 \frac{1}{2}$   | $\frac{11}{16}$  |
| fm up. part of Bilge to lr. edge of Sh'rstrake  | $36$  | $\frac{11}{16}$ | $36$  | $\frac{11}{16}$  |
| Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.  | $36$  | $\frac{11}{16}$ | $36$  | $\frac{11}{16}$  |
| Up. or Spar Dk Sh'rstrake, brdth & thickness  | $16 \frac{3}{4}$  | $\frac{11}{16}$ | $16 \frac{3}{4}$  | $\frac{11}{16}$  |
| Butt Straps to outside plating, breadth & thickness   | $115$   | $\frac{11}{16}$ | $115$   | $\frac{11}{16}$  |
| Lengths of Plating  | $46$  | $\frac{11}{16}$ | $46$  | $\frac{11}{16}$  |
| Shifts of Plating, and Stringers  | $50$  | $\frac{11}{16}$ | $50$  | $\frac{11}{16}$  |
| Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness   | $5 \times 3 \frac{1}{2} \times 8 \frac{1}{6}$             | $\frac{11}{16}$ | $5 \times 3 \frac{1}{2} \times 8 \frac{1}{6}$             | $\frac{11}{16}$  |
| Angle Iron on ditto   | $12$  | $\frac{11}{16}$ | $12$  | $\frac{11}{16}$  |
| Tie Plates fore and aft, outside Hatchways  | $12$  | $\frac{11}{16}$ | $12$  | $\frac{11}{16}$  |
| Diagonal Tie Plates on Beams No. of Pairs, 3  | $12$  | $\frac{11}{16}$ | $12$  | $\frac{11}{16}$  |
| Planksheer material and scantling   | $3 \frac{1}{2}$   | $\frac{11}{16}$ | $3 \frac{1}{2}$   | $\frac{11}{16}$  |
| Waterways   | $3 \frac{1}{2}$   | $\frac{11}{16}$ | $3 \frac{1}{2}$   | $\frac{11}{16}$  |
| Flat of Upper Deck do. do.  | $3 \frac{1}{2}$   | $\frac{11}{16}$ | $3 \frac{1}{2}$   | $\frac{11}{16}$  |
| How fastened to Beams   | $3 \frac{1}{2}$   | $\frac{11}{16}$ | $3 \frac{1}{2}$   | $\frac{11}{16}$  |
| Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness  | $30$  | $\frac{11}{16}$ | $30$  | $\frac{11}{16}$  |
| Is the Stringer Plate attached to the outside plating?  | <i>yes</i>  |                 |   |                  |
| Angle Irons on ditto, No.   | $3 \frac{1}{2} \times 3 \frac{1}{2} \times 8 \frac{1}{6}$ | $\frac{11}{16}$ | $3 \frac{1}{2} \times 3 \frac{1}{2} \times 8 \frac{1}{6}$ | $\frac{11}{16}$  |
| Tie Plates, outside Hatchways   | $12$  | $\frac{11}{16}$ | $12$  | $\frac{11}{16}$  |
| Diagonal Tie Plates on Beams, No. of pairs  | $12$  | $\frac{11}{16}$ | $12$  | $\frac{11}{16}$  |
| Waterways materials and scantlings  | $2 \frac{1}{2}$   | $\frac{11}{16}$ | $2 \frac{1}{2}$   | $\frac{11}{16}$  |
| Flat of Middle Deck do. do.   | $2 \frac{1}{2}$   | $\frac{11}{16}$ | $2 \frac{1}{2}$   | $\frac{11}{16}$  |
| How fastened to Beams   | $2 \frac{1}{2}$   | $\frac{11}{16}$ | $2 \frac{1}{2}$   | $\frac{11}{16}$  |
| Stringer Plates on ends of Lower Deck, Hold or Orlop Beams  | $30$  | $\frac{11}{16}$ | $30$  | $\frac{11}{16}$  |
| Is the Stringer Plate attached to the outside plating?  | <i>yes</i>  |                 |   |                  |
| Angle Irons on ditto, No.   | $3 \frac{1}{2} \times 3 \frac{1}{2} \times 8 \frac{1}{6}$ | $\frac{11}{16}$ | $3 \frac{1}{2} \times 3 \frac{1}{2} \times 8 \frac{1}{6}$ | $\frac{11}{16}$  |
| Stringer or Tie Plates, outside Hatchways   | $12$  | $\frac{11}{16}$ | $12$  | $\frac{11}{16}$  |
| Flat of Lower Deck  | $2 \frac{1}{2}$   | $\frac{11}{16}$ | $2 \frac{1}{2}$   | $\frac{11}{16}$  |
| Ceiling betwixt Decks, thickness and material   | $2 \frac{1}{2}$   | $\frac{11}{16}$ | $2 \frac{1}{2}$   | $\frac{11}{16}$  |
| in hold do. do.   | $2 \frac{1}{2}$   | $\frac{11}{16}$ | $2 \frac{1}{2}$   | $\frac{11}{16}$  |
| Main piece of Rudder, diameter at head  | $5 \frac{1}{2}$   | $\frac{11}{16}$ | $5 \frac{1}{2}$   | $\frac{11}{16}$  |
| do. at heel   | $3 \frac{1}{2}$   | $\frac{11}{16}$ | $3 \frac{1}{2}$   | $\frac{11}{16}$  |
| Can the Rudder be unshipped afloat?   | <i>yes</i>  |                 |   |                  |
| Bulkheads No. 5 Thickness of  | $6 \frac{1}{6}$   |                 | $6 \frac{1}{6}$   |                  |
| Height up upper deck—aftermath to lower deck.   |   |                 |   |                  |
| How secured to sides of ship  | <i>between double frames</i>                              |                 |   |                  |
| Size of Vertical Angle Irons  | $3 \times 3 \times 6 \frac{1}{6}$                         |                 | $30$  |                  |
| Are the outside Plates doubled two spaces of Frames in length?  | <i>yes</i>  |                 |   |                  |

Transoms, material. Knight-heads. Hawse Timbers. *iron*  
Windlass *iron* *Amerson Walker & Co* Pall Bitt *iron*

The FRAMES extend in one length from *keel* to *gunwale* Riveted through plates with  $\frac{7}{8}$  &  $\frac{3}{4}$  in. Rivets, about *7* apart.  
The REVERSED ANGLE IRONS on floors and frames extend across 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  $\frac{1}{8}$  in. diameter, averaging  $5 \frac{5}{8}$  ins. from centre to centre.  
Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets  $\frac{7}{8}$  in. diameter, averaging  $3 \frac{7}{8}$  ins. from centre to centre.  
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets  $7 \frac{1}{8} \times \frac{3}{4}$  in. diameter averaging  $3 \frac{1}{2}$  to  $3 \frac{7}{8}$  ins. from centre to centre.  
Butts of *3* Strakes at Bilge for  $\frac{1}{2}$  length, treble riveted with Butt Straps  $\frac{1}{6}$  thicker than the plates they connect.  
Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets  $\frac{7}{8}$  in. diameter, averaging  $3 \frac{7}{8}$  ins. from cr. to cr.  
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets  $7 \frac{1}{8} \times \frac{3}{4}$  in. diameter, averaging  $3 \frac{1}{2}$  to  $3 \frac{7}{8}$  ins. from cr. to cr.  
Edges of Main Sheerstrake, double or single riveted, *Upper Sheerstrake, double or single riveted.*  
Butts of Main Sheerstrake, treble riveted for  $\frac{1}{2}$  length amidships. Butts of Upper or Spar Sheerstrake, treble riveted *length amidships.*  
Butts of Main Stringer Plate, treble riveted for  $\frac{1}{2}$  length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *length.*  
Breadth of laps of plating in double riveting  $5 \frac{1}{2}$  Breadth of laps of plating in single riveting

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *treble and double*  
Waterway, how secured to Beams *iron gutter riveted* (Explain by Sketch, if necessary.)  
Beams of the various Decks, how secured to the sides? *ends turned, knees welded* No. of Breasthooks, *6* Crutches, *4*  
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *good*  
Manufacturer's name or trade mark, *Hopkins, H. M. S. Co., Stockton malleable; Bowditch, West Marsh.*  
The above is a correct description.  
Builder's Signature, *W. Beardsley* Surveyor's Signature, *J. H. Travcott*  
Surveyor to Lloyd's Register of British and Foreign Shipping.

IRON 474-0319

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? *few in butts*

Masts, Bowsprit, Yards, &c., are *Douglas pine, 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  
*Length fore mast 76'-6" - diam 21"*  
*" main mast 73'-6" - diam 20"*  
*" mizen mast 46'-6" - diam 16"*

| NUMBER for EQUIPMENT 16786 |                         | Fathoms.                      | Inches. | Test per Certificate. | Length & Size req'd pr Rule. | Test req'd per Rule. | ANCHORS. | 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.                   | 240     | 1 1/2                 | 40 5/10                      | 240 faths. 1 5/16    | Bowers   | 3                | 22-0-26            | 22-11-1-0             | 21                    | 21 1/2               |
| one                        | Fore Sails,             | Chain                         |         |                       | 58 7/10                      | 58 7/10              |          |                  | 21-2-0             | 22-0-0-0              | 21                    | 21 1/2               |
|                            | Fore Top Sails,         | <i>J. Hartness Sunderland</i> |         |                       |                              |                      |          |                  | 18-1-0             | 19-4-1-14             | 18                    | 19                   |
| suit                       | Fore Topmast Stay Sails | <i>16 Aug. 1877</i>           |         |                       |                              |                      |          |                  |                    |                       |                       |                      |
| good                       | Main Sails,             | <i>90-15 1/16 iron</i>        |         |                       |                              |                      |          |                  |                    |                       |                       |                      |
|                            | Main Top Sails,         | <i>90-10"</i>                 |         |                       |                              |                      |          |                  |                    |                       |                       |                      |
| and                        |                         | <i>90-8"</i>                  |         |                       |                              |                      |          |                  |                    |                       |                       |                      |
|                            |                         | <i>80-7"</i>                  |         |                       |                              |                      |          |                  |                    |                       |                       |                      |
|                            |                         | <i>80-5"</i>                  |         |                       |                              |                      |          |                  |                    |                       |                       |                      |
|                            |                         | <i>90-5"</i>                  |         |                       |                              |                      |          |                  |                    |                       |                       |                      |

Standing and Running Rigging *wire & hemp* sufficient in size and *good* in quality. She has *2* Long Boats and *3* others.

The Windlass is *good* Capstan *good* and Rudder *good* Pumps *7 of 7" brass Chambers - good.*

Engine Room Skylights.—How constructed? *1/4" casing to 20" above ridge-trak* How secured in ordinary weather? *bull's eyes.*

What arrangements for deadlights in bad weather? *bull's eyes*

Coal Bunker Openings.—How constructed? *Bunker rings.* How are lids secured? *by bar at under side* Height above deck? *flush with deck.*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Tide ports and scuppers.*

Cargo Hatchways.—How formed? *by plates*

State size Main Hatch *14 1/2 x 9 x 7 1/16 - 2 ft. above deck* Forehatch *9 1/2 x 7 1/6 x 7 1/16 - 2 ft. above deck* Quarterhatch *10 3/4 x 9 x 7 1/16 - 2 ft. above deck.*

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams? *One shifting beam main hatch.*

Hatches, If strong and efficient? *strong & efficient.*

|   |   |   |  |
|---|---|---|--|
| Order for Special Survey No. <i>628</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 | <i>March 13, 14, 19, 20, 22, 27; April 10, 12, 14, 19, 23, 25,</i>   |
| Date <i>12 March 1877</i>               |   | 2nd. On the plating during the process of riveting  | <i>27, 30; May 3, 17, 23, 25, 31; June 5, 7, 11, 14, 18, 22, 26,</i> |
| Order for Ordinary Survey No.           |   | 3rd. When the beams were in and fastened, and before the decks were laid....              | <i>29; July 10, 12, 13, 17, 19, 23, 25, 26, 31; August 8, 10,</i>    |
| Date                                    |   | 4th. When the ship was complete, and before the plating was finally coated or cemented..  | <i>22, 28, 29, 31; Sept. 1, 7, 11, 14, 17, 19, 21, 24, 27,</i>       |
| No. <i>156</i> in builder's yard.       |   | 5th. After the ship was launched and equipped   | <i>October 1, 3, 8, 10, 11, 15, 18, 19, 22, 29, 30; Nov. 1, 2,</i>   |

General Remarks (State quality of workmanship, &c.) *General quality of workmanship &c. - good.*

*Has Poop - frames extend to top height - beams of angle iron 5" x 3" x 7/16 spaced at alternate frames - stringer plates on ends of beams 29" x 7/16 - angles on d<sup>o</sup> 3 1/2" x 3 1/2" x 7/16 - tie plates on beams 9" x 7/16 - plating outside 6/16 - boundary plank teak - deck 3" y. p.*

*Has Forecastle - frames extend to top height - beams built 6" x 6/16 angles on d<sup>o</sup> 2 1/2" x 2 1/2" x 5/16 spaced at alternate frames - stringer plates on ends of beams 29" x 7/16 - angles on d<sup>o</sup> 3 1/2" x 3 1/2" x 7/16 - tie plates on beams 9" x 7/16 - plating outside 6/16 - boundary plank teak - deck 3" y. p.*

*Has Ballast Tanks. - frames cut - connection formed by knee plates - side plates 7/16 - angles on d<sup>o</sup> 3 1/2" x 3 1/2" x 7/16 - web plates 6/16 - angles on d<sup>o</sup> 2 1/2" x 2 1/2" x 6/16 - top plating 6/16 - tested by head of water to height of load line.*

*Additional strengthening at break of poop - The shestrake increased 2/16 & the stringer plate 1/16 in thickness.*

State if one, two, or three, decked vessel, or if spar, or awning 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* Outside *paint.*

I am of opinion this Vessel should be Classed *100 A. 1*

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, *J. H. Truscott*

Special ... £ 51 : 10 : 0 - 2 Nov. 1877

Certificate ... : : :

(Travelling Expenses, if any, £ )

Committee's Minute *6th November, 1877.*

Character assigned *100 A. 1*

*See Secretary's letter dated 20 Sep. 1877*  
*Double bottom 103 ft - double bottom 103 ft*