

IRON SHIP.

Rev. 23/2/73

No. 10685 Survey held at Sunderland Date, First Survey September 11/72 Last Survey September 17/73

On the Sea Steamer "Neptuno" Yard Number 9 Master Not appointed

TONNAGE under } 869.66
Tonnage Deck }
Ditto of Third, Spar, }
or Avoning Deck }
Ditto of Poop, or }
Raised Qr. Dk. }
Ditto of House } 4.14
on Deck }
Ditto of Forecastle }
Gross Tonnage } 873.79
Less Crew Space } 41.95

Less Engine Room 279.61
Register Tonnage } 552.23
as out on Beam }

ONE, OR TWO DECKED, THREE DECKED VESSEL.
SPAR, OR AWINING-DECKED VESSEL.
HALF BREADTH (moulded)... 13.46
DEPTH from upper part of Keel to top of Main Deck Beams 15.62
GIRTH of Half Midship Frame (as per Rule) ... 24.75
1st NUMBER ... 53.83
1st NUMBER, if a THREE-DECKED VESSEL
deduct 7 feet ... ---
LENGTH ... 218.5
2nd NUMBER ... 11761
PROPORTIONS—Breathths to Length ... 8
Depths to Length—Upper Deck to Keel ... 9
Main Deck ditto ... 13

Built at Sunderland
When built 1873 Launched 14 May/73
By whom built Osbourne, Graham & Co
Owners Messrs. Latham & Co.
Port belonging to London
Destined Voyage Not fixed
Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule ... 218 Feet. 6 Inches. BREADTH Moulded... 26 Feet. 11 Inches. DEPTH top of Floors to Upper Deck Beams ... 21 Feet. 4 Inches. Do. do. Main Deck Beams ... 14 Feet. 4 Inches. Power of Engines ... 130 Horse. N° of Decks with flat laid 2 N° of Tiers of Beams 2

Dimensions of Ship per Register, length 222.0 breadth, 27.3 depth, 20.6

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness ...	<u>7 1/2 x 2 1/4</u>	<u>7 1/2 x 2 1/4</u>
STEM, moulding and thickness...	<u>7 x 2 1/4</u>	<u>7 x 2 1/4</u>
STERN-POST for Rudder do. do.	<u>8 x 4</u>	<u>7 x 4 1/2</u>
for Propeller ...	<u>8 1/2 x 4</u>	<u>7 x 4 1/2</u>
Distance of Frames from moulding edge to moulding edge, all fore and aft ...	<u>22 in</u>	<u>22 in</u>
FRAMES, Angle Iron, for 1/2 length amidships ...	<u>3 1/2 x 3</u>	<u>3 1/2 x 3</u>
Do. for 1/2 at each end ...	<u>3 1/2 x 3</u>	<u>3 1/2 x 3</u>
REVERSED FRAMES, Angle Iron ...	<u>2 1/2 x 2 1/2</u>	<u>2 1/2 x 2 1/2</u>
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships ...	<u>1 1/2 x 6 1/2</u>	<u>1 1/2 x 6 1/2</u>
thickness at the ends of vessel ...	<u>1 1/2</u>	<u>1 1/2</u>
depth at 1/2 length amidships, as per Rule ...	<u>9</u>	<u>9</u>
height extended at the Bilges...	<u>twice midship depth</u>	<u>twice midship depth</u>
BEAMS, Upper, Spar, or Avoning Deck } Single or Double Angle Iron, Plate or Tee Bulb Iron }	<u>6 1/2 x 5</u>	<u>5 1/2 x 5</u>
Single or double Angle Iron on Upper edge ...	<u>2 1/2 x 2 1/2</u>	<u>4 x 2 1/2</u>
Average space...	<u>alternate frames</u>	<u>alternate frames</u>
BEAMS, Main or Middle Deck ...	<u>6 1/2 x 6</u>	<u>6 1/2 x 6</u>
Single or double Angle Iron, Plate or Tee Bulb Iron }	<u>2 1/2 x 2 1/2</u>	<u>5 x 2 1/2</u>
Single or double Angle Iron on Upper Edge ...	<u>2 1/2 x 2 1/2</u>	<u>5 x 2 1/2</u>
Average space...	<u>alternate frames</u>	<u>alternate frames</u>
BEAMS, Lower Deck, Hold or Upper } Single or Double Angle Iron, Plate or Tee Bulb Iron }	<u>12 1/2 x 10</u>	<u>12 1/2 x 10</u>
Single or double Angle Iron on Upper Edge ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
Average space...	<u>angles as per sketch</u>	<u>angles as per sketch</u>
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates ...	<u>7 1/2 x 8</u>	<u>7 x 8</u>
" Rider Plate ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
" Bulb Plate to Intercoastal Keelson ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
" Angle Irons ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
" Double Angle Iron Side Keelson ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
" Side Intercoastal Plate ...	<u>3 x 3</u>	<u>3 x 3</u>
do. Angle Irons ...	<u>3 x 3</u>	<u>3 x 3</u>
" Attached to outside plating with angle iron ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
BILGE Angle Irons ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
do. Bulb Iron ...	<u>6 1/2 x 6</u>	<u>6 1/2 x 6</u>
do. Intercoastal plates riveted to plating for length ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
STRINGER Angle Irons ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
Intercoastal plates riveted to plating for length ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>
SIDE STRINGER Angle Irons ...	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>

	Inches in Ship.	16ths in Ship.	Inches required	16ths required
Flat Keel Plates, breadth and thickness ...	<u>30</u>	<u>9 1/8</u>	<u>30</u>	<u>9 1/8</u>
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied <u>3/4</u> ft. up part of Bilge to l. edge of Sh'rstrake	<u>34</u>	<u>12 1/8</u>	<u>30</u>	<u>12 1/8</u>
Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	<u>40</u>	<u>8 1/2</u>	<u>30</u>	<u>8 1/2</u>
Up. or Spar Dk Sh'rstrake, brdth & thckns	<u>40</u>	<u>8 1/2</u>	<u>30</u>	<u>8 1/2</u>
Butt Straps to outside plating, breadth & thickness	<u>6 1/2</u>	<u>6 1/2</u>	<u>9 1/2</u>	<u>6 1/2</u>
Lengths of Plating ...	<u>9 feet</u>	<u>4 in</u>	<u>---</u>	<u>---</u>
Shifts of Plating, and Stringers ...	<u>2 spaces of frames</u>	<u>---</u>	<u>---</u>	<u>---</u>
Gunwale Plate on ends of Avoning, Spar, or Upper Deck Beams, breadth and thickness...	<u>4 1/2</u>	<u>6 1/2</u>	<u>4 1/2</u>	<u>6 1/2</u>
Angle Iron on ditto ...	<u>3 1/2 x 3 1/2</u>	<u>7</u>	<u>3 1/2 x 3 1/2</u>	<u>7</u>
Tie Plates fore and aft, outside Hatchways ...	<u>10</u>	<u>6</u>	<u>10</u>	<u>6</u>
Diagonal Tie Plates on Beams No. of Pairs, ...	<u>Nil</u>	<u>---</u>	<u>---</u>	<u>---</u>
Planksheer material and scantling ...	<u>Gutter gunwale</u>	<u>---</u>	<u>---</u>	<u>---</u>
Waterways do. do. ...	<u>3 1/2 in</u>	<u>3</u>	<u>---</u>	<u>---</u>
Flat of Upper Deck do. do. ...	<u>3 1/2 in</u>	<u>3</u>	<u>---</u>	<u>---</u>
How fastened to Beams ...	<u>Iron screw bolts and nuts</u>	<u>---</u>	<u>---</u>	<u>---</u>
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness ...	<u>48</u>	<u>9 1/2</u>	<u>48</u>	<u>9 1/2</u>
Is the Stringer Plate attached to the outside plating?	<u>Yes</u>	<u>---</u>	<u>---</u>	<u>---</u>
Angle Irons on ditto, No. <u>2</u> ...	<u>4 1/2 x 3 x 7</u>	<u>4 1/2 x 3 x 7</u>	<u>---</u>	<u>---</u>
Tie Plates, outside Hatchways ...	<u>10</u>	<u>8</u>	<u>10</u>	<u>8</u>
Diagonal Tie Plates on Beams, No. of pairs ...	<u>Nil</u>	<u>---</u>	<u>---</u>	<u>---</u>
Waterways materials and scantlings ...	<u>Cement</u>	<u>---</u>	<u>---</u>	<u>---</u>
Flat of Middle Deck do. do. ...	<u>3 1/2 in</u>	<u>3 1/2</u>	<u>---</u>	<u>---</u>
How fastened to Beams ...	<u>Iron screw bolts and nuts</u>	<u>---</u>	<u>---</u>	<u>---</u>
Stringer Plates on ends of Lower Deck, Hold or Upper Beams ...	<u>23</u>	<u>7</u>	<u>23</u>	<u>7</u>
Is the Stringer Plate attached to the outside plating?	<u>Yes</u>	<u>---</u>	<u>---</u>	<u>---</u>
Angle Irons on ditto, No. <u>3</u> ...	<u>3 1/2 x 3 1/2 x 7</u>	<u>3 1/2 x 3 1/2 x 7</u>	<u>---</u>	<u>---</u>
Stringer or Tie Plates, outside Hatchways ...	<u>4 1/2 x 4 x 6</u>	<u>4 1/2 x 4 x 6</u>	<u>---</u>	<u>---</u>
Flat of Lower Deck ...	<u>2 in Baltic fir</u>	<u>---</u>	<u>---</u>	<u>---</u>
Ceiling betwixt Decks, thickness and material in hold do. do. ...	<u>2 1/2 in</u>	<u>---</u>	<u>---</u>	<u>---</u>
Main piece of Rudder, diameter at head do. at heel ...	<u>4 3/4</u>	<u>---</u>	<u>4 3/4</u>	<u>---</u>
Can the Rudder be unshipped afloat?	<u>Yes</u>	<u>---</u>	<u>---</u>	<u>---</u>
Bulkheads No. <u>4</u> Thickness of <u>5 1/2</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>---</u>

Transoms, material. Light heads. Name Timbers. Iron
Windlass Iron Patent Pall Bitt Iron
The FRAMES extend in one length from Keel to gunwale
The REVERSED ANGLE IRONS on floors and frames extend near middle line to Hold Beams and to Main deck 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 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 1/4 ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 ins. from centre to centre.
Butts of 3 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/6 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 1/4 ins. from cr. to cr.
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/4 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 1/2 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 1/2 length amidships.
Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 1/2 length.
Breadth of laps of plating in double riveting 4 1/2 Breadth of laps of plating in single riveting 2 1/2
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double & treble throughout
Waterway, how secured to Beams Gutter gunwale (Explain by Sketch, if necessary.)
Beams of the various Decks, how secured to the sides? Lashed down ends, and rivetted to frames near gunwale No. of Breasthooks, 4 Crutches, 292 transoms
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angles & Bulbs by Stockton
Manufacturer's name or trade mark, Malleable Iron Co.; Plates by Skene Iron Co. and Bolckow, Vaughan & Co.

The above is a correct description.
Builder's Signature, Osbourne Graham & Co. Surveyor's Signature, James Gibson

Workmanship. Are the butts of plating planed or otherwise fitted? Planed 11867 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
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 generally
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

The certificates signed by Saml. Stegenna

NUMBER for EQUIPMENT 13670		Fathoms.	Inches.	Test per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
N ^o .	SAILS.	CABLES, &c.	244	1 1/16	37 1/2	1 1/16	37 1/2	1	19.2.7	20.8.1.21	18.0.0	19
	Fore Sails,	Chain ...	One sample in each length tested									
	Fore Top Sails,	(Machine where Tested, date, and name of Superintendent.)	5 Bussing strain of 50 1/2 tons marked L.P.H.T. 5.73									
	Fore Topmast Stay Sails	Hempen Stream	80	5 1/2								
	Main Sails,	Cable	90	15 1/16								
	Main Top Sails,	Hawser Chain	80	10								
		Towlines	80	6								
		Warp	80									
		quality <u>good</u>										

Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has 2 Long Boats and 2 others

The Windlass is good Capstan — and Rudder good Pumps 2 Metal & good

Engine Room Skylights. How constructed? Wood framing upon How secured in ordinary weather? Rods & Screws

What arrangements for deadlights in bad weather? Iron wood shutters with circular glass

Coal Bunker Openings. How constructed? Metal Castings How are lids secured? Studs Height above deck? 5 1/2 ins

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? No Bulwarks

Cargo Hatchways. How formed? Iron plate coverings and Headledges

State size Main Hatch 18ft x 9ft x 21ins above Fore hatch 7' 2" x 6' 4" x 21ins above Quarter hatch 14' 6" x 6' 8" x 21ins above

If of extraordinary size, state how framed and secured? —

What arrangement for shifting beams? Chie

Hatches, If strong and efficient? Yes

Order for Special Survey No. 2381

Date 10th Sept 1872

Order for Ordinary Survey No. —

Date —

No. 9 in builder's yard.

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 Build started 11th Sept 1872
- 2nd. On the plating during the process of riveting Oct 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100
- 3rd. When the beams were in and fastened, and before the decks were laid 5th 11th 17th 23rd 29th Oct 1872
- 4th. When the ship was complete, and before the plating was finally coated or cemented Jan 6th 11th 18th 25th 31st Aug 1873
- 5th. After the ship was launched and equipped 1st Sept 1873

General Remarks,

The main deck stringer plates are not cut in the way of Boilers as proposed by the Builders (please see principal Surveyors remarks dated 12th Oct 1872), the hold stringer plates have been reduced to 15ins in way of the Boilers, & strengthened with double angle Irons 3 1/2 x 3 1/2 x 7/16 and face plate on S. 9 x 9/16 and well rivetted.

A Ballast-tank is fitted in the fore hold, extending from the Collision bulkhead, aft about 35 feet, and one in the after hold extending from the after bulkhead of engine-room, aft about 59 feet.

This is a sister vessel to the Steamer, "Lancelot", report 10651

35
59
94

State if one, two or three decked vessel, or if spar or running decked, and length of poop, forecastle or raised quarter deck, or of double or part double bottom

How are the surfaces preserved from oxidation? Inside Portland Cement to upper turn Outside 3 Coats of paint

I am of opinion this Vessel should be Classed *100 A.I. of Bilges and Paint above

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

Special ... £ 45 : 12 : 0

Certificate ...

(Travelling Expenses)
(if any) £

Committee's Minute 30th Sept 1873

Character assigned

100 A I A & C P
Spar Decked etc IBW

This vessel appears eligible to be classed as recommended by "Spar deck" IBW

30/9/73