

Steel.
IRON SHIP.

14093

No. 14093 Survey held at Underland Date, First Survey 19th August Last Survey 19th October 1886
On the Red Screw Steamer Federation (Yard No. 214)

TONNAGE under
Tonnage Deck 2233.55
Ditto of Third Spar, or
Awning Deck 45.57
Ditto of Poop, or
Raised Q. Dk. 24.44
Ditto of Houses
on Deck 6.26
of Forecastle 56.51
Tonnage 2442.36
crew Space 22.80
2369.56
Engine Room 491.16
or Tonnage 1548.40
on Beam

ONE, OR TWO DECKED, THREE DECKED VESSEL.
SPAR, OR AWNING DECKED VESSEL.

Half Breadth (moulded) 19.91
Depth from upper part of Keel to top of Upper Deck Beams 28.33
Girth of Half Midship Frame (as per Rule) 43.12
1st Number 91.36
1st Number, if a 3-Decked Vessel deduct 7 feet 7.00
Length 84.36
2nd Number 298
2nd Number 25139
Proportions— Breadths to Length 7.48
Depths to Length— Upper Deck to Keel 10.52
Main Deck ditto 14.48

Master R. Partham
Built at Underland
When built 1885-6 Launched 31-7-86
By whom built Joseph L. Thompson & Sons
Owners Angar Bros
Residence 118 Bishopsgate St. London
Port belonging to London
Destined Voyage Genoa
If Surveyed while Building, Afloat, or in Dry Dock.
While building afloat in dry dock.

BREADTH— Feet. Inches. 298 0
Moulded... 39 9 1/4
DEPTH top of Floors to Upper Deck Beams 26 3
Do. do. Main Deck Beams 26 3

Dimensions of Ship per Register, length, 300 breadth, 40.1 depth, 25.1

L. depth and thickness Side bars
M. moulding and thickness...
POST for Rudder do. do.
" for Propeller
Distance of Frames from moulding edge to building edge, all fore and aft

ANGLES, Angle Iron, for 1/2 length amidships
" for 1/4 at each end
REVERSED FRAMES, Angle Iron
" depth and thickness of Floor Plate
" mid line for half length amidships
" thickness at the ends of vessel
" depth at 1/4 the half-bdth. as per Rule
" height extended at the Bilges

SPARS, Upper, Spar, or Awning Deck
" of d'ble Ang. Iron, Plate or Tee Bulb Iron
" of double Angle Iron on Upper edge
" average space...
SPARS, Main, or Middle Deck
" of d'ble Ang. Iron, Plate or Tee Bulb Iron
" of double Angle Iron on Upper Edge
" average space...

SPARS, Lower Deck
" of d'ble Ang. Iron, Plate or Tee Bulb Iron
" of double Angle Iron on Upper Edge
" average space...
SPARS, Hold, or Orlop
" of d'ble Ang. Iron, Plate or Tee Bulb Iron
" of double Angle Iron on Upper Edge
" average space...

KEELSONS Centre line, single or double plate,
" box, or Intercoastal, Plates
" Rider Plate
" Bulb Plate to Intercoastal Keelson
" Angle Irons
" Double Angle Iron Side Keelson
" Side Intercoastal Plate
" do. Angle Irons
" Attached to outside plating with angle iron

ANGLE IRONS
" do. Bulb Iron
" do. Intercoastal plates riveted to plating for length
ANGLE STRINGER Angle Irons
" Intercoastal plates riveted to plating for half length

ANGLE STRINGER Angle Irons attached to Keel
FRAMES extend in one length from Keel to bilge thence to Gunwale
REVERSED ANGLE IRONS on floors and frames extend from middle line to above main deck stringer and to Upper Deck
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 1/8 in. diameter, averaging 5 1/2 ins. from centre to centre.
Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 1 1/8 in. diameter, averaging 3 3/8 ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 1 1/8 in. diameter averaging 3 1/2 ins. from centre to centre.
Butts of Five Strakes at Bilge for half length, treble riveted with Butt Straps 3/32 thicker than the plates they connect.
Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 1 1/8 in. diameter, averaging 3 3/8 ins. from cr. to cr.
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 1 1/8 in. diameter, averaging 3 1/2 ins. from cr. to cr.
Edges of Main Sheerstrake, double or single riveted.
Butts of Main Sheerstrake, treble riveted for half length amidships. **Butts of Upper or Spar Sheerstrake**, treble riveted length amidships.
Butts of Main Stringer Plate, treble riveted for half length amidships. **Butts of Upper or Spar Stringer Plate**, treble riveted for half length.
Breadth of laps of plating in double riveting 5 1/2. Breadth of laps of plating in single riveting 5 1/2.
Butts of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double No. of Breasthooks, Nine Crutches, Four

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c. Angles, bulbs, plates, London Steel Co.
Manufacturer's name or trade mark Iron angles, bulbs, plates, London Steel Co.
The above is a correct description.
Builder's Signature, Joseph L. Thompson & Sons Surveyor's Signature, Isaac Williams

PLATES in Garboard Strakes, br'dth & thickness 36 3/32 36 3/32
" From Garboard to upper part of Bilges...
" Of d'bling at Bilge, or increased thickness, and length applied
" From up. prt of Bilge to l. edge of Sh'rstrake...
" Main Sheerstrake, breadth and thickness... 40 3/32 40 3/32
" Of d'bling at Sh'stk. & lng. applied
" From M'n. to Up. or Spar Dk. Sh'rstrake...
" Up. or Spar Dk Sh'rstrake, br'dth & thicken'ss...
Butt Straps to outside plating, breadth & thickness 16 1/2 19 1/2 16 1/2 19 1/2
Lengths of Plating
Shifts of Plating, and Stringers Varies
Gunwale Plate on ends of Awning, Spar, or
Upper Deck Beams, breadth and thickness... 43 1/32 43 1/32
Angle Iron on ditto 4x3 1/2 1/2 4x3 1/2 1/2
Tie Plates fore and aft, outside Hatchways 16 1/2 16 1/2
Diagonal Tie Plates on Beams No. of Pairs 4x3 1/2 1/2 4x3 1/2 1/2
Flat of Up., Spar, or Awning Dk. Seam
How fastened to Beams Butt & screw bolts
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness 43 1/32 43 1/32
Is the Stringer Plate attached to the outside plating? Yes
Angle Irons on ditto, No. 4x3 1/2 1/2 4x3 1/2 1/2
Tie Plates, outside Hatchways
Diagonal Tie Plates on Beams, No. of pairs
Flat of Middle Deck* do. Steel plates
How fastened to Beams Rivets
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams 40 1/32 40 1/32
Is the Stringer Plate attached to the outside plating? Yes
Angle Irons on ditto, No. 4x3 1/2 1/2 4x3 1/2 1/2
Stringer or Tie Plates, outside Hatchways
Flat of Lower Deck*

Ceiling betwixt Decks, thickness and material 2" Pine Battens
" in hold do. do.
Main piece of Rudder, diameter at head 3 3/4
" do. at heel 3 3/4
Can the Rudder be unshipped afloat? Yes
Bulkheads No. Seam No. per Rule Fin
" Thickness of 3/32
" Height up to upper deck
" How secured to sides of ship Between double frames
" Size of Vertical Angle Irons 5x3 1/2 x 3/32 and distance apart 30 ins.
" Are the outside Plates doubled two spaces of Frames in length? Yes

Riveted through plates with 1/8 in. Rivets, about 4 apart.
" Rivets, about 4 apart.
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State clearly where plating is of alternate thicknesses—as distinguished from diminished thickness at ends of vessel.

* If Iron Deck, state if whole or part, and if wood deck is laid thereon.

SLD953-0028

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? *A few at the butts only.*

Masts, Bowsprit, Yards, &c., are *Iron & Wood* in *Good* condition, and sufficient in size and length. If of Iron or Steel give Scantling, 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 Material, and if stamped with Maker's name. *Please see sketch attached hereto.*
State also Length and Diameter of Lower Masts and Bowsprit. *Pieces from the plates of which these masts are joined have been tested and have withstood the tests as proscribed in the Rules*

NUMBER & LETTER for EQUIPMENT		SAILS.		CABLES, &c.	Fathoms	Inches	Test per Certificate.	Inches per Rule.	Machine where Tested and Superintendent, also Number of Certificate.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate	Wt. req'd per Rule.	Machine where Tested, Superintendent, also Number of Certificate.	Description
N ^o .				Chain	240	1 1/2	634.88	240.14	28-7-86	Bower Anchors	5462	34-3-14	32.5-2-14	34-0-0	27-7-8	Diameter of
				Fore Sails,	45	1 1/2	223.34	75.18	28-7-86	Stream Anchors	5463	33-3-7	31-10-2-14	34-0-0	27-7-8	Diameter of
				Fore Top Sails,	Tested at R.N.C.P.Y. by J. Hartness											Diameter of
				Fore Topmast Stay Sails,	100	4	33 tons	100.12	Steel hawsers	Stream	5464	29-1-14	28-3-0-14	29-0-0	13-7-8	Diameter of
				Main Sails,	90	9 1/2	90.9 1/2	90-9 1/2	Certified by J. Hartness	Anchor	5459	11-0-14	13-0-0-0	10-3-0	26-7-8	No. of Fe
				Main Top Sails, and	90	8	90.8	90-8	Redburn & Co	Kedge	5460	5-2-0	7-16-1-0	5-2-0	26-7-8	No. of Bil
				quality	240	2 1/2	12 tons			2nd Kedge	5461	2-2-0	5-0-0-0	2-2-0	27-7-8	Where do

Standing and Running Rigging *4 1/2" x 1/2" Manila* sufficient in size and *Good* quality. She has *Two* Log Boats and *Two* others

The Windlass is *Starfield & Co's* Capstan *4 ft* Wheel and Rudder *Good* Pumps *Good*

Engine Room Skylights.—How constructed? *Seal on iron coamings* How secured in ordinary weather? *Hand screws*

What arrangements for deadlights in bad weather? *Seal flaps with buckle eyes.*

Coal Bunker Openings.—How constructed? *Moulded iron* How are lids secured? *Latch bars* Height above deck? *20.30 + 35"*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Scuppers Ports and Moring Pipes*

Cargo Hatchways.—How formed? *Iron plates and angles in the usual way*

State size Main Hatch *24'-0" x 13'-0"* Forehatch *16'-0" x 12'-0"* Quarterhatch *20'-0" x 13'-0" x 16'-0" x 12'-0"*

If of extraordinary size, state how framed and secured? *Shifting beam in fore and after hatch, two web-plate beams in*

What arrangement for shifting beams? *Track, and one in the first quarter hatch, three wood for and afters in ea*

Hatches, If strong and efficient? *2 1/2" Fir solid.*

Order for Special Survey No. <i>3324</i>	1st. On the several parts of the frame, when in place, and before the plating was wrought	<i>Build under S.P. and surveyed 1885 Aug. 192934</i>
Date <i>16 June 85</i>	2nd. On the plating during the process of riveting	<i>2449 1156 1721 2228 2930 Oct. 2539 1215 16 1921 2429 Nov. 3569 111</i>
Order for Ordinary Survey No. <i>214</i>	3rd. When the beams were in and fastened, and before the decks were laid...	<i>1820 2325 27 Dec. 2581 14 16 21 23 36 Jan. 6 13 Feb. 18 19 Mar. 12 182</i>
Date <i>16 June 85</i>	4th. When the ship was complete, and before the plating was finally coated or cemented...	<i>31 June 349 11 16 17 1821 2228 24 25 28 29 July 259 11 16 1921 22 22</i>
No. <i>214</i> in builder's yard.	5th. After the ship was launched and equipped	<i>29 Aug. 31 Sept. 24 8 10 14 16 21 23 24 29 30 Oct. 12 56 7 8 11 13</i>
State dates of letters respecting this case		<i>14th August 1885.</i>

General Remarks (State quality of workmanship, &c.) *The workmanship throughout is good.*

This steel screw steamer has been built in accordance with accompanying photo-prints of midship section and profile, and in general conformity with Rules for the class contemplated. She is a sister vessel to the S.P. "Chelydra" Report 4413841. The steel used in her construction was manufactured by the Langore Steel Co., and iron rivets have been used in her throughout.

The following are fitted in excess of the Rule requirements: viz: the butt straps & C.I. L & R strakes are 3/4" thicker than the plates they connect and treble riveted a space extending from twenty feet before to twenty feet abaft the machinery, and the inner bottom plating is increased 1/2" in thickness all fore and aft.

The Forecastle, Bridge (open), and Poop, are of the following lengths respectively 40'-0", 86'-0", & 34'-0"

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, forecastle, or raised quarter deck. (If double bottom, state particulars on separate form)

How are the surfaces preserved from oxidation? Inside *Cement & Paint* Outside *Paint*

I am of opinion this Vessel should be Classed *100 A 1* Three deck rule (Steel & 1/2 steel deck) *A+C*

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

Special *£ 84 : 5 : 0* 23rd Oct. 1886

(to be sent as per margin). Certificate ...

(Travelling Expenses, if any, £ ...)

Committee's Minute

Character assigned *100 A 1*

Surveyor to Lloyd's Register of British and Foreign Shipping

It is submitted that this vessel appears eligible to be classed 100 A 1 "Steel" recommended.

2 1/2" x 1/2" Steel and 1 1/2" x 1/2" Steel 3 1/2" x 1/2" Steel (particulars appended)

2 1/2" x 1/2" Steel & 1 1/2" x 1/2" Steel 3 1/2" x 1/2" Steel

2 1/2" x 1/2" Steel & 1 1/2" x 1/2" Steel 3 1/2" x 1/2" Steel

2 1/2" x 1/2" Steel & 1 1/2" x 1/2" Steel 3 1/2" x 1/2" Steel