

Spar, Awning or Part Awning Dk.

IRON OR STEEL STEAMER.

(Received by the Registrar) DEC 1892  
16766

Date of completion of Report 29<sup>th</sup> November 92. Port of Sunderland

No. 16766 Survey held at Sunderland Date, First Survey 6 February 92 Last Survey 26<sup>th</sup> November 1892

On the Steel Screw Steamer "CONSTANCE" - YARD N<sup>o</sup> 218 - Rig Schooner (2 masts)

**TONNAGE under Tonnage Deck** 3639.58

Do. between Tonnage Deck and 3rd, 4th, Spar or Awning Dk.

**Total under Upper Dk.** 3639.58

of Poop 184.87

Do. of Rais d Qr. (Dk. or Break)

Do. of Bridge House on Poop 3.73

Houses on Deck 62.06

excess of Hatchways 28.45

Forecastle 77.80

above Crown of Engine Room .. 3930.15

**Net Tonnage** 129.61

Crew Space 3800.54

above Crown of Engine Room .. 1257.45

Navigation Spaces 56.33/1313.98

**Register Tonnage** 2486.56

as cut on Beam ..

SPAR, AWNING OR PART AWNING DECKED VESSEL, or a Vessel having a continuous Shade Deck.

Master J. B. Rose  
Year of Appointment (1) As Master in service of owner of present vessel: 1892 (2) As Master of this vessel: 1892

**CLASS** 100.A.1

**Half Breadth (moulded)** 22.37

**Depth from upper part of keel to top of Main Deck Beams** 22.95

**Girth of Half Midship Frame (as per Rule)** 41.5

**1st Number** 86.83

**Length** 348.16

**2nd Number** 30231

**Proportions—Breadths to Length** 7.78

**Depths to Length—Main Deck to top of Keel** 15.16

**Destined Voyage** 1/2 Surveyed while Building, Afloat, or in Dry Dock

Built at Sunderland

When built 1892 Launched 11<sup>th</sup> July

By whom built Short Bros

Owners E. S. Gosling & J. G. Short

Managers J. V. Short & E. S. Gosling (see Mem attached)

Residence Sunderland

Port belonging to Sunderland

LENGTH on Deck as per Rule .....	Feet. 348	Inches. 2	BREADTH Moulded ..	Feet. 44	Inches. 9	DEPTH, top of Floors to Spar or Awn. Dk. Beams Do. do. Main Deck Beams ..	Feet. 27	Inches. 19	Power of Engines	Horse. 300	No. of Decks with flat laid	Two	No. of Tiers of Beams	Two
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Dimensions of Ship per Register, Length 365.0 breadth 45.0 depth 27.41 Spar or Awn. Dk. Moulded depth, ft. 22 ins. 0 1/2 To Main Deck. Round up of Beam, Main Dk. 11 ins.

**FORGINGS AND CASTINGS.**

**KEEL, Bar or Side Plates, depth and thickness** 11 x 2 3/4

**STEM, moulding and thickness** 11 x 6 1/2

**STERN-POST for Rudder do. do.** 11 x 6 1/2

for Propeller .. 8 1/2

**MAIN PIECE of Rudder, diameter at head do. at heel** 4 1/2

**RUDDER, how constructed** Forged & plated

Can the Rudder be unshipped afloat? yes.

**FRAMING.**

**FRAME** Angles, or L Bars for length amidships 300 feet

Do. for at each end 1/4 IN. PEAKS .. 5 1/2 x 3 1/2 x 8

Do. in way of Double Bottoms .. 3 1/2 x 3 1/2 x 8 1/2

Distance of Frames from moulding edge to moulding edge, all fore and aft .. 24

**REVERSED FRAME** Angles .. 3 1/2 x 3 1/2 x 7 1/2

**FLOORS, depth and thickness of Floor Plate** at mid-line for 1/3 length amidships .. Cellular double bottom

in way of Engines and Boilers ..

thickness at the ends of vessel ..

depth at 1/2 the half-bdth. as per Rule ..

height extended at the Bilges ..

**FLOORS & BRACKETS, in Cell Dble Bottoms** Distance apart .. 42 - 48

**CENTRE GIRDER, in Double bottom, depth and thickness** 6 4 10 6 4 10

Angles, Top 4 x 4 x 9 Bottom

**SIDE GIRDERS, number and thickness** Three 3 1/2 3 1/2 7 1/2 Three 3 1/2 3 1/2 7 1/2

Angles ..

**MARGIN PLATE, depth (exclusive of flange) and thickness** 4 4 9 4 4 9

Angles ..

**INNER BOTTOM PLATING, breadth and thickness of Middle Line Strake** 36 - 9 1/2 36 - 9 1/2

thickness in Engine and Boiler space ..

Remainder in Holds ..

**BEAMS, Spar or Awning Deck, Single Angle, Bulb Angle, Plate or Tee Bulb** 7 1/2 3 10 7 1/2 3 10

Angles on upper edge ..

Average space .. 24 - 24

**BEAMS, Main Deck, Single Angle, Bulb Angle, Plate or Tee Bulb** 8 3 11 8 3 11

Angles on upper edge ..

Average space .. 24 - 24

**BEAMS, Lower Deck, Single Angle, Bulb Angle, Plate or Tee Bulb** ..

Angles on upper edge ..

Average space ..

**BEAMS, Hold, or Orlop, Plate or Tee Bulb** ..

Angles on upper edge ..

Average space ..

**BEAMS, Poop Deck, Angle, Bulb Angle, Plate or Tee Bulb** 7 1/2 3 10 7 1/2 3 10

Angles on upper edge ..

Average space .. 48 - 48

**BEAMS, Bridge Deck, Angle, Bulb Angle, Plate, or Tee Bulb** 7 1/2 3 10 7 1/2 3 10

Angles on upper edge ..

Average space .. 48 - 48

**BEAMS, Forecastle Deck, Angle, Bulb Angle, Plate or Tee Bulb** 8 1/2 - 8 8 1/2 - 8

Angles on upper edge .. 3 3 6 3 3 6

Average space .. 48 - 48

**PILLARS between Decks, Size and Spacing** 2 1/2 4 1/2 9 1/2 2 1/2 4 1/2 9 1/2

**WEB FRAMES, in Fore Body, No. and spacing br'dth and thickness** Three 18 8 1/2 18 8 1/2

No. of Side Stringers ..

**WEB FRAMES, in After Body, No. and spacing br'dth and thickness** Three 18 8 1/2 18 8 1/2

No. of Side Stringers ..

Size of Angles or Tee Bars to Web Frames ..

**BRACKET PLATES to Stringers between Web Frames, depth and thickness** 18 - 8 18 - 8

**KEELSONS AND STRINGERS.**

**CENTRE LINE KEELSON, Vertical Plate above floors, Through Plate, or Intercostal Plate** Cellular double bottom

Rider Plate ..

Bulb Plate to Intercostal Keelson ..

Horizontal Plates on Floors ..

Angles ..

**SIDE KEELSON, Angles** ..

Bulb or Plate above floors, for length ..

Intercostal Plate, for length ..

Attached to outside Plating with Angle ..

**BILGE KEELSON, Angles** ..

Bulb or Plate above floors, for length ..

Intercostal Plate, for length ..

Attached to outside Plating with Angle ..

**BILGE STRINGER Angles** ..

Bulb Plate, for length ..

Intercostal Plate, for length ..

Attached to outside Plating with Angle ..

**SIDE STRINGER Angles** ..

Bulb or Intercostal Plate, for length ..

**Spar, or Awning Deck Stringer Plates, on ends of Beams, breadth and thickness** 54 11 54 11

Angle on ditto .. 4 x 4 x 9 4 x 4 x 9

Tie Plates, fore and aft, outside Hatchways Deck plating increased to ..

Diagonal Tie Plates on Bms., No. of prs. 7 7

Flat of Deck \* Iron or Steel, for whole len. yellow pine 3 ins. bolts nuts

Wood on top Material and thickness ..

How fastened to Beams riveted ..

**Main Deck Stringer Plate, breadth & thickness** 54 10 54 10

Angles on ditto, No. 2 4 x 4 x 9 4 x 4 x 9

Tie Plates, outside Hatchways Deck plating increased to ..

Diagonal Tie Plates on Bms., No. of prs. 7 7

Flat of Deck \* Iron or Steel, for whole len. yellow pine 3 ins.

Wood Material and thickness ..

How fastened to Beams riveted ..

**Lower Deck Stringer Plates, br'dth & thickn's** ..

Angles on ditto, No. ..

Tie Plates, outside Hatchways ..

Flat of Deck \* Material and thickness ..

How fastened to Beams ..

**Hold, or Orlop Stringer Plate, br'dth & thickn's** ..

Angles on ditto, No. ..

Tie Plates, outside Hatchways ..

Flat of Deck. Material and thickness ..

How fastened to Beams ..

**Poop Deck Stringer Plate, breadth & thickness** 34 7 34 7

Angles on ditto .. 3 1/2 x 3 x 7 3 1/2 x 3 x 7

Tie Plates .. 17 17

Flat of Deck. Material and thickness .. yellow pine 3 ins.

**Bridge Deck Stringer Plate, br'dth & thickn's** 41 8 41 8

Angle on ditto .. 3 1/2 x 3 1/2 x 9 3 1/2 x 3 1/2 x 9

Tie Plates .. 17 17

Flat of Deck. Material and thickness .. yellow pine 3 ins.

**Forecastle Deck Stringer Plate, br'dth & thickn's** 30 5/8 30 5/8

Angle on ditto .. 3 x 3 x 9/16 3 x 3 x 9/16

Tie Plates Deck plating .. 24 x 54 24 x 54

Flat of Deck. Material and thickness .. yellow pine 3 ins.

**PLATING.**

**FLAT PLATE KEEL, breadth and thickness** 36 17 36 17

Dblng increased thickn's & len. appl. 1/2 length .. 13 13

**PLATES in Garboard Strakes, breadth & thickn's** 54 13 54 13

from Garboard to lower part of Bilges .. 12 12

State Thickness of Plating in way of Double Bottom ..

**Bilges, No. of Strakes and thickness** four 12 12

Of doubling at Bilge, or increased thickness, and length applied ..

from up. part of Bilge to l. edge of Sh'strake .. 12 12

**Main Sheerstrake, breadth and thickness** 44 12 44 12

Of doubling at Sh'stk. & lng. applied 1/2 length at ends of Bridge .. 24 24

from Main to Spar Dk. or Awn. Dk. Sh'stk .. 9 9

**Spar or Awn. Dk. Sh'stk., br'dth & thickn's** 40 12 40 12

Strake between Spar & Main sheer doubled for 3/4 length .. 7 7

Poop sides .. 7 7

Bridge sides .. 7 7

Forecastle sides .. 7 7

Lengths of Plating eight spaces ..

BULKHEADS.		No. in Vessel	No. Reqd. by Rule
Thickness	Angles	Spacing	Height up
W. T. BULKHEADS	30	all to spar deck	double
VERTICAL	30	all to spar deck	double
Horizontal	48	Built angle 48	48
VERTICAL	48	Built angle 30	48
Horizontal	48	Built angle 30	48

Are the outside Plates doubled two spaces of Frames in length? *yes*

The FRAMES extend in one length from middle line to margin plate *thence to gunwale* riveted through Plates with  $\frac{7}{8}$  in. Rivets, about  $6\frac{1}{2}$ " apart

The REVERSED ANGLE on floors and frames extend from 2 bar frames to top height from peak to peak, and alternately to fore-castle deck and spar deck

**RIVETING OF EDGES AND BUTTS OF SHELL PLATING AND BUTTS OF STRINGER PLATES, TIE PLATES, KEELSONS, &c.**

Garboard, double riveted to Bas Keel or Flat Plate Keel, with rivets 1 in. diameter, averaging 4 ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, all double riveted; with rivets  $\frac{7}{8}$  in. diameter, averaging  $3\frac{1}{2}$  ins. from centre to centre.

Butts from Keel to turn of Bilge, worked clencher, treble or double riveted; treble for whole length, with rivets 1 in. dia., averaging 4 ins. from cr. to cr. overlapped for whole length, treble riveted for whole length; with rivets  $\frac{7}{8}$  in. dia., averaging  $3\frac{1}{2}$  ins. from cr. to cr. thicker than the plates they connect.

Butts of Strakes at Bilge for length, treble riveted with Butt Straps 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  $3\frac{1}{2}$  ins. from centre to centre.

Butts from Bilge to Main Sheerstrake, worked clencher, treble or double riveted; treble for whole length, with rivets 1 in. dia., averaging 4 ins. from cr. to cr. overlapped for whole length, treble riveted for whole length; with rivets  $\frac{7}{8}$  in. dia., averaging  $3\frac{1}{2}$  ins. from cr. to cr.

Edges of Main Sheerstrake, double or single riveted. Spar or Awning Sheerstrake, double or single riveted.

Butts of Main Sheerstrake, treble riveted for whole length amidships. Butts of Spar or Awning Sheerstrake, treble riveted for whole length.

Butts of Main Sheerstrake, treble riveted for whole length amidships. Butts of Spar or Awning Stringer Plate, treble riveted for whole length.

Butts of Main Sheerstrake, treble riveted for whole length amidships. Butts of Spar or Awning Stringer Plate, treble riveted for whole length.

Single or Double Straps for length amidships. Butts of Centre Girder, treble riveted.

Butts of Inner Bottom Plating double riveted for whole length. Butts of Centre Girder, treble riveted.

Breadth of edge laps of Shell Plating in double riveting  $6\frac{1}{2}$  to  $5\frac{1}{2}$  Breadth of edge laps of Shell Plating in single riveting  $11\frac{1}{2}$  to  $9$

Butt Straps of Shell Plating, breadth and thickness  $19 \times \frac{3}{16}$ ,  $13 \times \frac{3}{16}$ ,  $13 \times \frac{3}{16}$ ,  $11\frac{1}{2} \times \frac{3}{16}$  Butts, if Lapped, breadth of laps  $11\frac{1}{2}$  to  $9$

Butt Straps of Keelsons, Stringer and Tie Plates, treble or double, riveted treble and double

Manufacturer's name or trade mark of the Iron or Steel (state process of manufacture of Steel) used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c. *Siemens-Martin, Steel plates by Consett S. Co., Moor S. Co., Stockton Mal. S. Co., J. Spencer & Son, Iron plates Consett S. Co., Stockton Mal. S. Co., Moor S. Co., J. Spencer & Son, Blue Bars Formanburg S. Co., Iron Bars S. Co., Stockton Mal. S. Co.*

Workmanship. Are the butts of plating planed or otherwise fitted? *planed*

Is the riveted work properly closed? *yes*

Are the liners between the frames 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 plating? *a few in butts only*

Are the butts of Plating, Stringers, &c., properly shifted and strapped? *yes*

LOWER MASTS	Material	Total length	DIAMETER AND THICKNESS			No. of Plates in round	ANGLES		RIVETING	
			At Partners	Heel	Head		Number	Size	Spans	Butts
Fore	Steel	53-10	20 x 7/16	16 x 7/16	16 x 7/16	1	30	30	30	
Main	"	56-4	20 x 7/16	16 x 7/16	16 x 7/16	1	30	30	30	
Mizen	"									

EQUIPMENT No. 37724	LETTER W	ANCHORS.	Description of Anchor	Makers	Where and when tested and Superintendent	WEIGHT, EX STOCK			TEST, PER CERTIFICATE			WEIGHT REG. P. B. RULE		
						Cwts.	qrs.	lbs.	Tons	Cwts.	qrs.	lbs.	Cwts.	qrs.
24201	1st Bower	42	1	0	10	2	7	37	6	1	0	40	0	0
24172	2nd "	40	0	0	10	0	0	35	15	0	0	40	0	0
24173	3rd "	35	1	0	8	3	7	32	11	1	0	34	0	0
	4th "													
24243	Stream	117	2	0				114	0	0				
24244	Kedge	6	0	14	1	2	7	7	2	0		6	0	0
24245	2nd Kedge	3	0	14	0	3	5	12	0	21		3	0	0

CHAIN CABLES.	Number of Certificate	Fathoms	Size	Test per Certificate Tons	Weight of Chain Cable	Fathoms & Size Per Rule	Description	Makers of Cables	Where and when tested, and Superintendent	Material	FATHOMS & SIZE PER RULE	
											Fathoms	Size
	10029	150 1/2	2 1/2	107 1/2 - 76 1/2	322-2-19	300-2 1/2	Head Link	J Taylor & Son	RWCRT 30-9-92	Steel	200	3 1/2
	10028	150	2 1/2	107 1/2 - 76 1/2	319-3-15	637-3-0		"	"	"	90	3 1/2
	9955	90	1 1/2	38-25 1/2	68-0-22	90-13 1/2		"	"	"	90	3
	Towline	130	4 1/2	39		120-4 1/2						

Boats *Two life boats and two thurs*

Pumps, Number *mini hand pumps* Diameter of Barrel and Tail Pipe *5" and 2 1/2"*

The Windlass is *Emerson Walker & Thompson Bros* Capstan *six steam winches*

Engine Room Skylights.—How constructed? *Steel plates and bars*

What arrangements for deadlights in bad weather? *Iron shutters and bullseyes*

Coal Bunker Openings.—How constructed? *Iron plates & bars* How are lids secured? *Hatches and bottom* Height above deck? *15"*

Number of Scuppers, and number and dimensions of Freeing Ports, &c. *eight scuppers each side. Eight Ports each side 3" 5" x 2" 0"*

Cargo Hatchways.—How formed? *Plates and bars in the usual way* Hatches.—If strong and efficient? *yes*

State size No. 1 Hatch (Forward) *24" 0" x 16" 0"* No. 2 Hatch *30" 0" x 16" 0"* No. 3 Hatch *30" 0" x 16" 0"* No. 4 Hatch *24" 0" x 16" 0"*

Number of Web Plates, Shifting Beams, and Fore and Afters to each Hatch *Two web plates in No. 1 and No. 4; Three web plates in No. 2 and No. 3, three fore and afters in each*

Bulwarks, height above deck and description *4" 8" plates & stayed* Main Rail, material and size *5 1/2" 3"*

The above is a correct description.

Builder's Signature *W. B. Harrison* Surveyor's Signature *George Harrison*

Order for Special Survey No. *3498* Date *15 Jan 92*

Order for Ordinary Survey No. *—* Date *—*

No. *218* in builder's yard.

Dates of Surveys held while building as per Section 16.

1st. On the several parts of the frame, when in place, and before the plating was wrought

2nd. On the plating during the process of riveting

3rd. When the beams were in and fastened, and before the decks were laid

4th. When the ship was complete, and before the plating was finally coated or cemented

5th. After the ship was launched and equipped

6th. After the ship was launched and equipped

State dates and initials of letters respecting this case *1891 (a) 19 Nov. 192 (a) 1st March (E) 27th April. (a) 15th November.*

General Remarks (State quality of workmanship, &c.) *This steel spar decked screw steamer has been built in accordance with the approved plans, as amended, the Secretary's Letters dated as above stated and in other respects in conformity with the Rules for the 100 A class. The workmanship is good. The steel used in the construction has been manufactured by the firms herein mentioned and tested at the works in accordance with the Rules.*

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop *36* ft., R.Q.D. or Break *—* ft., Bridge Dk. *72* ft., F'castle *44* ft., (in feet and tenths) where the Poop is on top of the R.Q.D., or when the Poop or R.Q.D. is joined to the B.D., this should be distinctly stated

No. and Material of Decks (if Iron or Steel) and whether wholly or partially covered with wood, and No. of tiers of Beams (this information is to be given as it should appear in the Register Book) *1 DE (STL) and SPAR DE (STL-W) and web frames, side stringers (1RA)*

Official No. *99618* ; Signal Letters *—*

PARTICULARS OF WATER BALLAST—

Double bottom, aft, length *—* and water capacity in tons *—*

Double bottom, forward, length *—* and water capacity in tons *—*

Double bottom, under engines and boilers, length *—* and water capacity in tons *—* If under Engines only, or Boilers only, state which

Double bottom, constructed on the cellular system, length *288* and water capacity in tons *940*

Fore peak tank, water capacity in tons *105* After peak tank, water capacity in tons *55*

Midship deep tank, length *—* and water capacity in tons *—* Other tanks, if fitted, length *—* and water capacity in tons *—*

The above have *now* been tested as required by the Rules.

(If necessary, furnish further information by sketch.)

How are the surfaces preserved from oxidation? *Inside portland cement & paint Outside paint*

FREEBOARD assigned by the Committee, as per Secretary's Letter, dated *15th November 1892*

In Summer *7 ft. 1 1/2 ins.*

In Winter *7 ft. 6 ins.*

For Winter in North Atlantic *7 ft. 11 ins.*

Fresh Water above the centre of disc *5 1/2 ins.*

To top of Wood, Iron or Steel Upper, Spar, Awning, or Part Awning Deck. *Statutory deck line 2" above wood spar deck at side.*

State if marked on Vessel's sides in accordance with Notice No. 579 *yes*

The amount of Entry Fee *£ 5:0:0* is received by me, *George Harrison*

Special *£ 120:0:6* 3. Dec 1892

Certificate *£ —*

Travelling Expenses, if any *£ —*

I am of opinion this Vessel should be Classed *\*100A-1 STEEL SPAR DECKED*

Committee's Minute *FRI 2 DEC 1892*

Character assigned *100A1 Steel Spar dk.*

*a + c p + L Mell 11 92*

*15th Dec 92 - Spar dk (Stl - W) + web frames*

*7K*

This vessel appears to have been built in accordance with the Rules and the approved plans, and it is submitted that she is eligible to be classed 100A1 (Steel) Spar Deck as recommended.

100A1 (Steel) Spar Deck

1 SR (Stl) + Spar dk (Stl-W) + web frames

W. B. - Call DB to (Particulars above)

*George Harrison*

Surveyor to Lloyd's Register of Shipping & Foreign Shipping.