

3 Decks.

IRON OR STEEL STEAMER.

MON. AUG 17 1896

No. 1842

State if Report is also sent on the Machinery of the Vessel. Yes

Date of completion of report 13th August 1896 Port of Middlesbrough - on - Tees Received at London Office

Survey held at Middlesbrough - on - Tees

Date, First Survey, 1st April 1896 Last Survey, 4th August 1896

On the Screw Steamer

ÆON

(Yard No. 325 Rig Schooner)

TONNAGE under Tonnage Deck... 2427.66

One THREE DECKED VESSEL.

Master A. Heron

Do. between Tonnage Dk. and 3rd and 4th Dk. Total under Upper Dk.

CLASS 100 A 1 Vessel

Year of appointment

Do. of Poop 53.64

Half Breadth (moulded) 21.90

Do. of Bridge (House) 56.58

Depth from upper part of Keel to top of Upper Deck Beams 24.16

Do. of Forecastle 4.23

Girth of Half Midship Frame (as per Rule) 42.50

Do. of Houses on Dk. 32.93

deduct 7 feet 7.00

Do. of excess of Hatchways 25.48

1st Number 81.56

Do. above Crown of Engine Room 25.48

Length 312.16

Gross Tonnage 2548.76

2nd Number 2545.9

Less Crew Space 64.90

Proportions—Breadth to Length 7.1

Less above Crown of Engine Room 25.48

Depth to Length—Upper Deck to top of Keel 12.92

TONNAGE FOR FEES 2512.86

Main Deck ditto

Less Engine Room 824.88

Destined Voyage River Plate via Cape

Less Navigation Spaces 37.56

If Surveyed while Building, Afloat, or in Dry Dock Yes

Register Tonnage 1650.42

as cut on Beam

Dimensions of Ship per Register, Length 314 breadth 44.05 depth 20.75 Moulded depth, ft. 23 ins. 3 To Upper Dk. Round up of Beam, Upper Dk. 11 ins.

FRAMING.		Inches in Ship.	Inches in Ship.	20ths in Ship.	Inches per Rule Or as Appro.	20ths per Rule ved.	FORGINGS or CASTINGS.		Inches in Ship.	Inches in Ship.	20ths in Ship.	Inches per Rule Or as Appro.	20ths per Rule ved.				
FRAME, Angles, or Bars for 1/2 length amidships		5	3 1/2	8	5	3 1/2	8	KEEL, Bar or Side Plates, depth and thickness									
Do. for 1/2 at each end		5	3 1/2	8	5	3 1/2	8	STEM, moulding and thickness	11 x 2 1/2		11 x 2 1/2						
Do. in way of Double Bottoms at Solid Floors		3 1/2	3 1/2	8	3 1/2	3 1/2	8	STERN-POST for Rudder do. do.	11 x 5 1/2		11 x 5 1/2						
" " at intermdt. Bkts.								" for Propeller	11 x 5 1/2		11 x 5 1/2						
Distance of Frames from moulding edge to moulding edge, all fore and aft		24			24			MAIN PIECE of Rudder, diameter at head	8		8						
" " " do. at heel								" " do. at heel	4		4						
REVERSED FRAME, Angles		3 1/2	3 1/2	8	3 1/2	3 1/2	8	RUDDER, how constructed	Iron forging. Plated in usual way.								
DEEP FRAMING, depth of girder								Can the Rudder be unshipped afloat?	Yes								
FLOORS, depth and thickness of Floor Plate at mid-line for 1/2 length amidships								KEELSONS & STRINGERS.									
" in way of Engines and Boilers								CENTRE LINE KEELSON, Vertical Plate above floors, Through Plate, or Intercoastal Plate									
" thickness at the ends of vessel								" Rider Plate									
" depth at 1/2 the half breadth, as per Rule								" Bulb Plate to Intercoastal Keelson									
" height extended at the Bilges								" Horizontal Plates on Floors									
FLOORS & BRACKETS in Cell Dble Bottoms		40		7/16	40		7/16	" Angles									
" Distance apart		24			24			SIDE KEELSON, Angles									
ENTIRE GIRDER, in Double bottom, depth and thickness		40		10	40		10	" Bulb or Plate above floors, for									
" Angles, Top		4	4	9	4	4	9	" Intercoastal Plate, for									
" Bottom		6 1/2	4	9	6 1/2	4	9	" Attached to outside Plating with Angle									
SIDE GIRDERS, number and thickness		One		7/16			7/16	BILGE KEELSON, Angles									
" Angles		3 1/2	3 1/2	8	3 1/2	3 1/2	8	" Bulb or Plate above floors, for									
MARGIN PLATE, depth (exclusive of flange) and thickness		33		8	26		8	" Intercoastal Plate for									
" Angles		3 1/2	3 1/2	8	3 1/2	3 1/2	8	" Attached to outside Plating with Angle									
INNER BOTTOM PLATING, breadth and thickness of Middle Line Strake		50		7/16			7/16	BILGE STRINGER Angles									
" in Engine and Boiler space				7/16			7/16	" Bulb Plate for									
" Remainder in Holds				9/16			9/16	" Intercoastal Plate for									
BEAMS, Upper Deck, Single Angle, Bulb Angle, Plate or Tee Bulb		4 1/2	3	10	4 1/2	3	10	" Attached to outside Plating with Angle									
" Angles on upper edge								SIDE STRINGER Angles									
" Average space		24			24			" Bulb or Intercoastal Plate, for									
BEAMS, Middle Deck, Single Angle, Bulb Angle, Plate or Tee Bulb								" Attached to outside plating with Angle									
" Angles on upper edge								Upper Deck Stringer Plates, br'dth & thickness	45	10	45	10					
" Average space								" Angle on ditto	4 1/2 x 4 1/2	10	4 1/2 x 4 1/2	10					
BEAMS, Lower Deck, Single Angle, Bulb Angle, Plate or Tee Bulb		1 1/2 x 10		11-10	1 1/2 x 10		11-10	" Tie Plates fore and aft, outside Hatchways	Deck plating increased 1/2 way								
" Angles on upper edge		3 1/2	3 1/2	8	3 1/2	3 1/2	8	" Deck, * Iron or Steel, for	Whole lng.								
" Average space		48						" Wood Deck. Material & thickness	None								
BEAMS, Hold, or Orlop, Plate or Tee Bulb								Middle Deck Stringer Plate, br'dth & thickness									
" Angles on upper edge								" Angles on ditto, No.									
" Average space								" Tie Plates outside Hatchways									
BEAMS, Poop Deck, Angle, Bulb Angle, Plate or Tee Bulb		4 1/2	3	8	4 1/2	3	8	" Diagonal Tie Plates on Bms., No. of prs.									
" Angles on upper edge								" Deck, * Iron or Steel, for									
" Average space		48			48			" Wood Deck. Material & thickness									
BEAMS, Bridge Deck, Angle, Bulb Angle, Plate or Tee Bulb		6	3	8	6	3	8	Lower Deck Stringer Plate, br'dth & thickness	45	15	45	15					
" Angles on upper edge								" Angles on ditto, No.	4 1/2 x 4 1/2	9	4 1/2 x 4 1/2	9					
" Average space		24			24			" Tie Plates, outside Hatchways									
BEAMS, Forecastle Deck, Angle, Bulb Angle, Plate or Tee Bulb		6	3	8	6	3	8	" Deck, * Material and thickness									
" Angles on upper edge								Hold, or Orlop Stringer Plate, br'dth & thckn's									
" Average space		24			24			" Angles on ditto, No.									
PILLARS, In 'tween Deck, size and spacing		24			24			" Tie Plates outside Hatchways									
" Hold		4			4			" Deck. Material and thickness									
" Quarter 'tween Dks.		24			24			Poop Deck Stringer Plate, breadth & thickness	24	4	24	4					
" in Hold		4			4			" Angle on ditto	3 1/2 x 3	4	3 1/2 x 3	4					
WEB-FRAMES, In Fore Body, No. and spacing								" Tie Plates									
" br'dth. & thickness		15			15			" Deck. Material and thickness									
" No. of Side Stringers		40			40			Bridge Deck Stringer Plate, br'dth & thickness	51	7	51	7					
WEB-FRAMES, In E. & B. Space, No. & spacing								" Angle on ditto	3 x 3	7	3 x 3	7					
" br'dth. & thickness		15			15			" Tie Plates									
" No. of Side Stringers		40			40			" Deck. Material and thickness									
WEB-FRAMES, In After Body, No. and spacing								Forecastle Deck Stringer Plate, b'dth & th'kns	24	7	24	7					
" br'dth. & thickness		15			15			" Angle on ditto	3 1/2 x 3	4	3 1/2 x 3	4					
" No. of Side Stringers		40			40			" Tie Plates									
BRACKET PLATES to Stringers between Web Frames, depth and thickness		3 1/2	3 1/2	8	3 1/2	3 1/2	8	" Deck. Material and thickness									
								BULKHEADS.	Number.	Thickness.	STIFFENERS.						
								In Vessel.	Per Rule.	16ths or 20ths.	Horizontal.	Vertical.	Spacing.	Single or Double Frames.	Height up.		
								W. T. BULKHEADS	51	51	9.	1/2 x 3 1/2	36	Double as Rule			
								PARTITION				Bulk angles	705	Reg			
								LONGITUDINAL									
								Are the outside Plates doubled two spaces of Frames in length?								Yes	Foundation

PLATING.										RIVETING.										
STRAKES.	AS IN SHIP.						PER RULE OR AS APPROVED.		EDGES.				BUTTS.							
	AMIDSHIP.		FORWARD.		AFT.		AMIDSHIP.		Single or Double.	Breadth of Lap.	RIVETS.		Double or Treble and for what Length.	RIVETS.		STRAIPS.		IF LAPPED.		
	Breadth.	Thickness.	Thickness.	Thickness.	Breadth.	Thickness.	Diam.	Spacing or. to cr.			Diam.	Spacing or. to cr.		Breadth.	Thick-ness.	Breadth.	For what Length.			
																		Inches.	20ths.	20ths.
FLAT PLATE KEEL.....	36	16	12	12	36	16	Double	6	1	4	Treble	1	3½	19	20					
(If Bar Keel, state Riveting)	36	12	11	12	36	12	52	5¼	5¼	3¾										
GABBOARD OR A Strake ...	46	11	9	12	46	11	52	5¼	5¼	3¾										
State actual thickness in way of Double Bottom.	54	10	9	11	54	10	52	5¼	5¼	3¾										
B "	46	11	9	13	46	11	52	5¼	5¼	3¾										
C "	54	11	9	11	54	11	52	5¼	5¼	3¾										
D "	44	12	9	12	44	12	52	5¼	5¼	3¾										
E "	50	11	9	11	50	11	52	5¼	5¼	3¾										
F "	44	12	9	9	44	12	52	5¼	5¼	3¾										
G "	50	11	9	9	50	11	52	5¼	5¼	3¾										
H "	44	12	9	9	44	12	52	5¼	5¼	3¾										
J "	52	11	9	9	52	11	52	5¼	5¼	3¾										
K "	46	12	9	9	46	12	52	5¼	5¼	3¾										
L "	51	13	9	9	51	13	52	5¼	5¼	3¾										
M "	42	15	10	10	42	15	52	5¼	5¼	3¾										
N Bridge	35	8			35	8	Single	2½	¾	3	Double	¾	2⅝	9¾	8					
O Side	51	8			51	8	52	2½	¾	3	Treble	¾	2⅝	14¾	8					
P "																				
Q "																				
R "																				
DOUBLING of Flat Plate Keel																				
Length of Bilges	In lieu of doubling the Sheerstrake Bridge side plating increased to 5/8 The butts of the upper strake treble riveted and sheerstrake doubled at ends of Bridge for 20 feet.																			
Thickness of Strake below																				
POOP SIDES				7		7	Single	2½	¾	3	Double	¾	2⅝	9¾	7					
BRIDGE SIDES							Single	2½	¾	3	Double	¾	2⅝	9¾	7					
FORECASTLE SIDES				7		7	Single	2½	¾	3	Double	¾	2⅝	9¾	7					

Manufacturer's name or trade mark of the Iron or Steel (state process of manufacture of Steel) used for Frames, Floors, Beams, Keelsons, Tie and Stringer Plates, Plating, &c. ?
Steel plates. Stockton Malleable Co & Moss Steel & Iron Co
Steel angles & bolts. Corsett Iron Co
Iron plates. Stockton Malleable Co & J. Hill & Co
Iron angles. Stockton Malleable Co

Upper Deck { Butts, treble riveted for $\frac{3}{4}$ length amidship.
Stringer Plate { Straps, single, double or overlapped for whole length amidship.
Middle Deck { Butts, treble riveted for $\frac{3}{4}$ length amidship.
Stringer Plate { Straps, single, double or overlapped for whole length amidship.
Butts of Bilge & Side Stringers and Tie Plates, treble or double riveted ?
Inner Bottom Plating, riveting of Edges *Single* Butts *Double* length
Centre Girder Butts, *treble* riveted Keelson Butts, *✓* riveted.
Frames, riveted through Plates with $\frac{3}{8}$ in. Rivets, about $6\frac{1}{2}$ apart.
Rivets, state whether Iron or Steel *Iron.*

FRAMES extend in one length from Middle line to Tank side thence to gunwale.
REVERSED FRAMES on floors and frames extend from Middle line to above Lower deck stringer angle and to main deck alternately, all to main deck in way of Bridge Poop, and alternate ones to Forecastle deck.

MASTS, SPARS, &c.										RIVETING.			
LOWER MASTS.....	Fore	Main	Mizen	Material.	Total Length.	DIAMETER AND THICKNESS.				No. of Plates in round.	Number.	Size.	Seams.
						At Partners.	Heel.	Hounds.	Head.				
				Steel	68-0.	18 x $\frac{5}{16}$	15 x $\frac{5}{16}$	15 x $\frac{5}{16}$	14 x $\frac{5}{16}$	Two.	✓	✓	Single
				Steel	60-9.	18 x $\frac{5}{16}$	15 x $\frac{5}{16}$	15 x $\frac{5}{16}$	14 x $\frac{5}{16}$	Two.	✓	✓	Treble & double
Bowsprit													
Topmasts, Yards and Remainder of Spars <i>Pitch Pine</i>													
Rigging, Material and Size, Shrouds <i>Wire Manila</i> Shrouds $3\frac{1}{2}$ Stays $4\frac{1}{2}$ Backstays $3"$													
Sails. <i>One complete</i> Suit of Sails, and the following spare sails													

EQUIPMENT No. 29162 LETTER K.										ANCHORS.			
Number of Certificate.	Anchors.	WEIGHT, EX. STOCK		WEIGHT OF STOCK		TEST, PER CERTIFICATE.				WEIGHT REQ. BY RULE.		Description of Anchor.	Makers.
		Cwts.	qrs.	Cwts.	qrs.	Tons.	cwts.	qrs.	lbs.	Cwts.	qrs.		
29926	1st Bower	42	3	0	0	34	13	3	0	42	2	Reliance Patent	M. L. Byers & Co.
29919	2nd "	42	2	14	52	34	11	3	14	42	2	52	52
29900	3rd "	36	3	14	52	33	13	1	21	36	1	52	52
	Collective weight	122	1	0	0				121	1	0		
29584	Stream	10	3	0	2	12	13	0	14	10	3	Rodger's	John Green
29588	Kedge	5	2	4	1	21	7	18	1	21	5	52	52
	2nd Kedge												

CHAIN CABLES.										HAWSERS AND WARPS.					
Number of Certificate.	Fathoms.	Size.	Test per Certificate Tons.	WEIGHT OF CHAIN CABLE		Fathoms and Size per Rule.	Description.	Makers of Cables.	When and where tested, and Superintendent.	Material	Fathoms.	Size.	Breaking Test of Steel Wire Tons.	Fathoms and Size per Rule.	
				Supplied.	Per Rule.										
12144	120	1 1/2	88 1/2	63 1/2	212	224	425-1-0	240-1 1/2	Steel Link John Green	19-5-96 R.W.C.P.S.	TOWLINE	Steel	100	4	33
12181	120	1 1/2	88 1/2	63 1/2	212	224	425-1-0	240-1 1/2	Steel Link John Green	H. J. Mofford	HAWSER	52	90	3 1/2	22
											WARP	52	90	2 3/4	15 1/2
425-2-5 (Chains collapsed as per Ci 690 found in order)															
Iron Stream Chain or Steel Wire ...	45	4 1/2	35				45-4 1/2	Steel Wire Webster			Steel Hawseers Certified by makers Webster & Co				

Boats *Two Life Boats 23 feet x Jolly Boat 18 feet*

Pumps, Number *Vertical Hand Pumps (tested)* Diameter of Barrel and Tail Pipe *Barrel 6" Tail Pipe 3"*

Windlass is *Emerson Walker & Co (Steam)* Capstan *Four Steam Winches.*

Engine Room Skylights. How constructed? *Steel plates and angles.*

What arrangements for deadlights in bad weather? *Leath flaps with bulls eyes.*

Coal Bunker Openings. How constructed? *Steel plates & angles* How are lids secured? *Hatch bars* Height above deck? *18 1/2 x 28"*

Number of Scuppers, and numbers and dimensions of Freeing Ports, &c. *Four Freeing Ports before and four abaft Bridge (30" x 18")*

Ceiling in Holds, thickness and material *2 1/2 Pine* Ceiling between Decks, thickness and material *2" Pine*

Cargo Hatchways. How formed? *Steel plates and angles in the usual manner.* Hatches, If strong and efficient? *2 1/2 Fir.*

State size No. 1 Hatch (Forward) *22-0 x 16-0* No. 2 Hatch *24-0 x 16-0* No. 3 Hatch *24-0 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, and three iron fore and afters in each*

No. of Breasthooks *Eight* No. of Crutches *Three*

Bulwarks, height above deck and description *44" Iron plates and stanchions Main Rail, material and size*

The above is a correct description.

Builder's Signature (here only) *per J. B. ROPNER & SON.*

Surveyor's Signature *J. B. Ropner*

Surveyor to Lloyd's Register of British and Foreign Shipping.

Correspondence.—State dates and initials of letters respecting this case (Reference should be made to any correspondence connected with this case)

16th March 1896 (M), and letters re previous vessel.

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.

to plate, &c., conform well to each other? Yes.

from the faying surfaces? Yes.

Do any rivets break into or through the seams or butts of plating? A few at the butts only.

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

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

This Steel screw steamer (which is a similar vessel to the S.S. "Vera" No. Report-1480) has been built in accordance with the approved plans of Midship Section and Profile as amended, the Secretary's letters of the above-mentioned dates bearing upon the case, and in other respects as required by the Rules and Circulars for the class contemplated. The workmanship is good throughout.

The steel used in her construction has been tested at the Steel Works by the Society's Surveyors in conformity with the requirements of the Rules.

The Bow anchors are Reliance Patent-Stockless and the cast-steel parts of them have been subjected to drop and mechanical tests at Lipton & Wolingham by Messrs C.E. Brown and C. Craig.

She has a Bilge Keel formed of bulb $9 \times \frac{3}{8}$ and angles $3 \frac{1}{2} \times 3 \frac{1}{2} \times \frac{7}{8}$ fitted for a length of about a hundred and eight feet.

The Surveyor should state the Number of Report and Name of any Sister Vessel.

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop 28.9 ft., R.Q.D. or Break ✓ ft., Bridge Dk. 68 ft., F'castle 37.08 ft. (in feet and tenths). When the Poop is joined to the B.D., this should be distinctly stated ✓

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 dk (iron) 2 tiers of Beams + Web frames.

Official No. 105852; Signal Letters ✓

How are the surfaces preserved from oxidation? Inside Portland cement + paint. Outside Paint.

PARTICULARS OF WATER BALLAST.—State whether the Double bottom is constructed on the cellular system Yes.

Where fitted.	Length. Feet.	Water Capacity. Tons.	Where fitted.	Length. Feet.	Water Capacity. Tons.
Double bottom, aft,	104	208	Fore peak tank,	✓	✓
Double bottom, forward,	126	288	After peak tank,	12	48
Double bottom, under Engines and Boilers,	22	58	Midship deep tank,	✓	✓
Double bottom, if under Engines only,	✓	✓	Other tanks, if fitted,	✓	✓
Double bottom, if under Boilers only,	✓	✓	(If necessary, furnish further information by sketch.)	✓	✓

State whether the above have been tested as required by the Rules. Yes.

For Special Survey No. 284

Date 14.3.96

For Ordinary Survey No. ✓

Date ✓

325 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
- 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

1896 April 1.4.13.15.16.14.21.23.24.24.29 May 1.6.8.12.13.15 18.19.21.22.24.29 June 1.2.3.5.8.10.11.12.15.19.19.22.23.25.26.29 July 1.2.6.10.13.16.20.22.24.29.31 Aug 1.4.

Total No. of Visits 52

Amount of Entry Fee £ 5-0-0

Special Survey Fee £ 84-16-6

Travelling Expenses, if any £ - - -

Fees applied for, 13-4 1896 Received by me, 13-8 1896

Certificate to be sent to

In my opinion this Vessel should be Classed

with, or without Freeboard, as condition of Class

100A 1 Steel. a r.c.p. With Freeboard

Jesse Williams

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

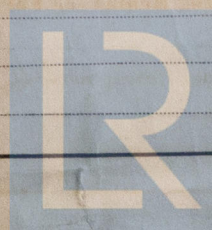
Character assigned

a r.c.p. + 2 m.c. 8, 96

100A 1 Steel with fbd. 2. 4 1/2

100A (1 m) 2 A+B + Web frames

Hull Certificate



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