~~IRON~~ OR STEEL SHIP.

(Received at London Office, 22 JULY 1889) BOX CASE 15136

Date of writing Report 14th July 1889 Port of Sunderland

No. 15136 Survey held at Sunderland Date, First Survey 2nd January Last Survey 15th July 1889

On the Screw Steamer "Aurania" (Yard No. 84) Rig Schooner

TONNAGE under Tonnage Deck 1016·62

~~Do. under Tonnage Dk.~~

~~Do. under 4th, Spar or Awning Dk.~~

~~Total under Upper Dk.~~

Do. of Poop 48·32

Do. of Raised Qr. Dk. or Break 72·60

Do. of Bridge House 101·23

Do. of Houses on Deck Chart 5·29

Do. of excess of Hatchways 28·54

Do. of Forecastle 3·43

Tonnage 1276·33

Deduct Space 47·61

1228·72

Engine Room 408·43

Register Tonnage 820·29

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

	Feet.
Half Breadth (moulded)	14·33
Depth from upper part of Keel to top of Upper Deck Beams	18·20
Girth of Half Midship Frame (as per Rule)	32·40
1st Number	67·93
~~**1st Number, if a 3 Decked Vessel** .. deduct 7 feet~~	
Length	240·66
2nd Number	16348
Proportions—Breadths to Length	6·9
Depths to Length—Upper Deck to Keel	13·2
Main Deck ditto	—

Master J. Williamson

Year of appointment (1) As master in service of owner of present vessel:—1882 (2) As master of this vessel 1889

Built at Sunderland

When built 1889 Launched 18-6-89

By whom built Strand Slipway Co. (Ld.)

Owners Charles Frederick Henry Leslie.

Managers Fenwick & Co.

(If desired to be entered in Reg. Book.)

Residence London

Port belonging to London

Destined Voyage London

If Surveyed while Building, Afloat, or in Dry Dock. While Building and Afloat

LENGTH on deck as per Rule ... Feet. 240 Inches. 8 | **BREADTH**—Moulded ... Feet. 34 Inches. 8 | **DEPTH** top of ~~Floors~~ Cellular bottom to Upper Deck Beams ~~Do. do. Main Deck Beams~~ Feet. 14 Inches. 11 | Power of Engines ... Horse. 130 | N°. of Decks with flat laid One | N°. of Tiers of Beams Two.

Dimensions of Ship per Register, length, 242' breadth, 34·95 depth, 14·95 Moulded depth 14'-6"

	Inches in Ship.			Inches per Rule.		
KEEL, depth and thickness ... ... Slabs	8½×1			8½×1		
STEM, moulding and thickness...	8×2½			8×2½		
STERN-POST for Rudder do. do.	8×5			8×5		
" " for Propeller	8×5			8×5		
Distance of Frames from moulding edge to moulding edge, all fore and aft	23			23 (Class 100 A)		
	Inches. In Ship.	Inches. In Ship	~~16ths or~~ 20ths In Ship	Inches per Rule	Inches per Rule	~~16ths or~~ 20ths per Rule
FRAMES, Angle ~~Iron~~, for ⅗ length amidships ...	4	3	7	4	3	7
Do. for ⅕ at each end	4	3	6	4	3	6
REVERSED FRAMES, Angle ~~Iron~~	3	3	6	3	3	6
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships ...	—	39	6/16	—	35	6/16
" thickness at the ends of vessel	—	—	6/16	—	—	6/16
" depth ¾ the half-bdth. as per Rule ...	Floors on alternate frames on					
" height extended at the Bilges... ...	the cellular system as approved					
BEAMS, Upper, ~~Spar, or Awning~~ Deck Single ~~or d'ble~~ Ang. ~~Iron, Plate or Tee~~ Bulb ~~Iron~~	5½	3	8	5½	3	8
Single ~~or double~~ Angle ~~Iron~~ on Upper edge ...	5	3	9	5	3	9
Average space...	—	23	—	—	23	—
BEAMS, Main, or Middle Deck ... ... Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	—	—	—	—	—	—
Single, or double Angle Iron, on Upper Edge ...	—	—	—	—	—	—
Average space...	—	—	—	—	—	—
BEAMS, Lower Deck— Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	—	—	—	—	—	—
Single or double Angle Iron on Upper Edge ...	—	—	—	—	—	—
Average space...	—	—	—	—	—	—
BEAMS, Hold, or Orlop— Single ~~or d'ble Ang. Iron, Plate or Tee~~ Bulb ~~Iron~~	—	9½	9	—	9½	9
~~Single or~~ double Angle ~~Iron~~ on Upper Edge ...	4	4	8	4	4	8
Average space...	—	As Profile				—
KEELSONS Centre line, single ~~or double~~ through plate, ~~box, or Intercostal, Plates~~ ...	—	4½	9	—	4½	9
~~Outsider Plate~~ Inner bottom plating in Strake	30		8/16	—	30	8/16
~~Double Plate to Intercostal Keelson~~ ... ... Keel	—	—	6/16	—	—	6/16
Angle Irons on upper edge of centre girder	3	3	6/16	3	3	6/16
Angle Iron ~~Side Keelson~~	4	4	8/16	4	4	8/16
Intercostal Plate girders	—	—	6/16	—	—	6/16
Angle Irons	3	3	6/16	3	3	6/16
Riveted to outside plating with angle iron	3	3	6/16	3	3	6/16
BILGE ~~Irons~~ Flange plate	—	31	7	—	24	7
~~Double Iron~~ angles	3½	3½	7	3½	3½	7
Intercostal plates riveted to plating for ... length	—	—	—	—	—	—
BILGE ~~Irons~~ Angles	5	3½	9	5	3½	9
Plates riveted to plating for ... length	—	—	—	—	—	—
SIDE Angles ~~Irons~~ way of R. D. Dk.	5	3½	9	5	3½	9

	Inches. In Ship.	~~16ths or~~ 20ths In Ship.	Inches. per Rule	~~16ths or~~ 20ths per Rule
Flat Keel Plates, breadth and thickness	—	—	—	—
PLATES in Garboard Strakes, br'dth & thickness	40	11	34	11
" From Garboard to upper part of Bilges... ...	—	10-9	—	10-9
" Of d'bling at Bilge, or increased thickness, and length applied half	Three strakes increased 20 alternately			
" From up. prt of Bilge to lr. edge of Sh'rstrake...	—	10-9	—	10-9
" Main Sheerstrake, breadth and thickness.....	36	12	36	12
" Of d'blng at Sh'stk. & lng. applied 3/5	20	9	20	9
" From M'n. to Upr. or Spar Dk. Sh'rstrake....	—	—	—	—
" Up. or Spar Dk Sh'rstrake, brdth & thickn'ss...	—	—	—	—
Butt Straps to outside plating, breadth & thickness	16½ 14½	11½ 14-10-11	16½ 14½	11½ 14-10-11
Lengths of Plating Six spaces of Frame				
Shifts of Plating, and Stringers First three	—	—	—	—
Gunwale Plate on ends of ~~Awning, Spar, or~~ Upper Deck Beams, breadth and thickness...	34½	10	34½	10
Angles ~~Iron~~ on ditto	5×3½	9	5×3½	9
Tie Plates fore and aft, outside Hatchways Deck plating in way of Openings				
Diagonal Tie Plates on Beams No. of Pairs increased 1-2/16 as Plans				
Flat of Up., ~~Spar, or Awning~~ Dk.* Iron plates	—	7/16	—	6/16
How fastened to Beams	—	Riveted		
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	—	—	—	—
Is the Stringer Plate attached to the outside plating?	—	—	—	—
Angle Irons on ditto, No.	—	—	—	—
Tie Plates, outside Hatchways	—	—	—	—
Diagonal Tie Plates on Beams, No. of pairs	—	—	—	—
Flat of Middle Deck* do. do.	—	—	—	—
How fastened to Beams	—	—	—	—
Stringer Plates on ends of ~~Lower Deck~~, Hold or Orlop Beams	31	9	31	9
Is the Stringer Plate attached to the outside plating?	Yes	—	—	—
Angles ~~Irons~~ on ditto, No. Three & four	4×4 8		4×4 8	
~~Stringer or Tie Plates, outside Hatchways~~ ...	5×3½ 3½×3½	9 7	5×3½ 3½×3½	9 7
Flat of Lower Deck*	—	—	—	—
Ceiling betwixt Decks, thickness and material ...	2" Pine battens			—
" in hold do. do. ...	2½	—	—	—
Main piece of Rudder, diameter at head	5¾	—	5¾	—
do. at heel	3	—	3	—
Can the Rudder be unshipped afloat? Yes	—	—	—	—
Bulkheads No. Four No. per Rule Four	—	—	—	—

" Thickness of 6-3/16

" Height up Two to Upper Deck & two to R. D. Dk. as Profile.

" How secured to sides of ship Between double frames

" Size of Vertical Angle Irons 4×3×7/16 and distance apart 30 ins.

" Are the outside Plates doubled two spaces of Frames in length? Yes

The ... one length from Keel to flange plate & thence to Gunwale Riveted through plates with 7/8 in. Rivets, about 4 apart.

The ... LES ~~IRONS~~ on floors and frames extend from middle line to above hold beam strings and to Upper deck alternately.

W... arious lengths of Plates and Angle Irons properly connected? Yes And butts properly shifted? Yes

... board, double riveted to Keel, with rivets 1/8 in. diameter, averaging 5½ ins. from centre to centre.

" ... of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets ⅞ & ¾ in. diameter, averaging 3¾ & 3½ ins. from centre to centre.

" Bu... om Keel to turn of Bilge, worked carvel, double and treble riveted; with rivets ⅞ & ¾ in. diameter averaging 3⅞ & 2⅝ ins. from centre to centre.

" Butts of all Strakes ~~at Bilge~~ for ½ length, treble riveted with Butt Straps 1-2/16 thicker than the plates they connect. excepting those of B. S. & 2 strakes which are tapered, and the garboards which are double strakes.

" Edges from Bilge to Main Sheerstrake, worked clencher, double ~~or single~~ riveted; with rivets ⅞ & ¾ in. diameter, averaging 3¾ & 3 5/16 ins. from cr. to cr.

" Butts from Bilge to Main Sheerstrake, worked carvel, ~~double~~ treble riveted; with rivets ⅞ & ¾ in. diameter, averaging 3⅞ & 2 5/8 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 ½ length amidships. ~~Butts of Upper or Spar Sheerstrake, treble riveted ... length amidships.~~

" Butts of Main Stringer Plate, treble riveted for ½ length amidships. ~~Butts of Upper or Spar Stringer Plate, treble riveted for ... length.~~

" Breadth of laps of plating in double riveting 5½. 4½ Breadth of laps of plating in single riveting —

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble & double No. of Breasthooks, Five Crutches, Three

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Steel Plates, W. Hartlepool Steel Co. Consett Iron Co.

Manufacturer's name or trade mark, Iron plates. Swan Bros Iron angles. S. Tyzack & Co. Steel angles & Bulbs. Dorman Long & Co.

The above is a correct description.

Builder's Signature, per pro the Strand Slipway Co John Swan

Surveyor's Signature, J. Williams

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

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.

State whether Rivets are of Iron or Steel.

(Form No. 1 for Iron or Steel Ships—1000—2/4/89—Transfer Ink.)

ROBERT EDMUND TAYLOR & SON, Commercial and General Steam Printers, 19, Old Street, Goswell Road, London, E.C.

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

Do the edges of the carvel work and of the butts fay 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 p

to plate, &c., conform well to each other? Yes Are the rivet holes well and sufficiently countersunk in the plate and pun

from the faying surfaces? Yes Do any rivets break into or through the seams or butts of the plating? A few, at the butts

Masts, ~~Bowsprit,~~ Yards, &c., are Wood in Good condition, and sufficient in size and length. *If of Iron or Steel give S... 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 M... and if stamped with Maker's name.*

State also Length and Diameter of Lower Masts and Bowsprit

Number for Equipment 17778	CABLES, &c. Number of Certificate.	Fathoms.	Inches.	Test per Certificate. Tons.	Fathoms & Inches per Rule.	Machine where Tested and Superintendent, also Name of Chain Maker.
Letter for do. C	5959	240	1 9/16	61 8/20. 43 8/20	270-1 9/16	27-6-89
SAILS. Fore Sails,	Makers of Chains	J. Abbot & Co		Tested at R. McP's by J. Hartley		
Fore Top Sails,	Chains Callipered			as per Cir. 690 & found in order		
Fore Topmast Stay Sails,	~~Iron Stream Cable or~~ Steel Wire ..	90	3 3/4	29	75-1	
Main Sails,	~~Hempen Str'm Cable or~~	Certified by		makers	Webster & Co	
Main Top Sails, and quality Good	TOWLINE— ~~Hemp or~~ Steel Wire .	90	3 1/4	22	90-10	Steel hawsers
	Hawser	90	2 3/4	15 1/2	90-8	Certified by
	Warp.....	90	6	Hemp	90-6	Craven & Spedding

ANCHORS. Number of Certificate (State if any and which Anchors are Stockless)	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested, Superintendent, and Name of Anchor Maker.
The bower anchors are Wastneys Smiths "patent stockless" cast steel. Makers J. Spencer & Sons				
19004	29-2-14	28-6-3-14	23-2-0	J. Spencer & Sons 25-6-89
19007	29-1-19	28-5-0-0	23-2-0	26-6-89
19006	25-3-14	25-12-2-0	20-0-0	26-6-89
Collective Weights	84-3-22		67-0-0	
Stream	8-1-26	10-12-2-0	8-0-0	Tested at R. McP's 24-6-89
Kedge	4-0-14	6-10-0-0	4-0-0	18-6-89
~~Bow~~ Kedge....	2-0-0	4-10-0-0	2-0-0	18-6-89

Standing and Running Rigging G.I. Wire & Manilla sufficient in size and Good in quality. She has One ~~Long~~ Lifeboat and two others

The Windlass is Clark Chapman & Co's Steam Capstan 4 Lift Winches and Rudder Good Pumps Good

Engine Room Skylights.—How constructed? Of iron on iron Coamings How secured in ordinary weather? Hand Screws

What arrangements for deadlights in bad weather? Iron flaps with bulls eyes

Coal Bunker Openings.—How constructed? Wrought iron How are lids secured? Hatch bars Height above Bridge deck? 16 & 33 ins

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

Cargo Hatchways.—How formed? Iron plates and angles in the usual way **Hatches,** If strong and efficient? Yes For Solid

State size **Main Hatch** 26-10" × 16-0" Forehatch 19-2" × 12-0" Quarterhatch 23-0" × 16-0" & 15-4" × 12-0"

If of extraordinary size, state how framed and secured.... Two wed frames in way of Main Hatch and one in way of after Main Hatch and the deck plating in way of these Hatchways increased 2/16 in thickness. What arrangement for shifting beams? Efficie

Order for Special Survey No. 3530 Date 10 Decr. 88.

Order for Ordinary Survey No. ✓ Date ✓

No. 84 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 } Built under sp. s. and surveyed 1889 Jan. 24 29 30 Feb

2nd. On the plating during the process of riveting } 9 14 18 20 22 26 28 March 5 11 12 18 21 27 April 11 8 10 12 15 19 24 25

3rd. When the beams were in and fastened, and before the decks were laid.... } May 3 4 9 14 16 20 22 24 27 29 June 3 4 5 8 12 14 18 21 26 29 July

4th. When the ship was complete, and before the plating was finally coated or cemented.. } 9 11 15

5th. After the ship was launched and equipped

Total No. of Visits

State dates of letters respecting this case 13th 22nd & 29th December 1889 & January 3rd 1889.

General Remarks (State quality of workmanship, &c.) This steel screw steamer has been built in accordance with the approved photo-prints of Midships Section and Profile as amended, the Secretary's letters of the above mentioned dates, and in general conformity with the Rules for the Class contemplated. The workmanship throughout is good.

The steel used in her construction was manufactured by the Firms mentioned on the front of this Report, and it has been tested as required by Notice No. 436; Iron rivets have been used throughout.

The bower anchors are Wastneys Smiths "patent stockless cast steel", and they have been subjected to drop and mechanical tests by Mr. A. J. Boolds, and the marks on them correspond with the certificates issued by him.

A bilge keel formed of bulb 8" × 8/10" with double angles 3 1/2" × 3 1/2" × 7/10" is fitted for a length of one hundred and twenty feet amidships.

The bottom is cemented with enamel cement (Wailes) at the request of the Owners, please see letter from them attached to Std Report No. 15044.

How are the surfaces preserved from oxidation? Inside Wailes Dove & Co. Cement & Paint Outside Paint

Particulars for Record in R.B.—Length of Poop 29·5 ft., R.Q.D. 59·5 ft, Bridge Dk., 47·9 ft., F'castle 32·7 ft.; No. of Dks. (excluding spar, awn., &c.) One

Material of dks. Iron If spar, awn. dk., &c. ✓ Material of spar, awn. dk., &c. ✓; No. of tiers of beams (with and without dks. laid) Two

Official No. ✓; Signal Letters ✓. If double bottom, state particulars on separate form.

I am of opinion this Vessel should be Classed ✠ 100 A1 Steel (deck, bulkheads, floors, girders & inner bottom iron) A & C.P.

The amount of the Entry Fee .....£ 4 : 0 : 0 is received by me, JHW

Special .....£ 55 : 14 : 6 19 July 1889

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

(Travelling Expenses, if any, £ ✓).

Jesse Williams

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) as recommended — 1 Dk (iron) 2 tier beams — Cell D.B. (particulars appended) Well Dk —

22/7/89

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Reference should be made to any correspondence connected with the case.

Certificate to be sent to

Committee's Minute TUES 23 JULY 1889

Character assigned 100 A1 Steel

A & CP

10k In 2 tiers B

Well Dk

HULL CERTIFICATE WRITTEN

J. Smile 7/89

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