Archgrove X. [illegible] BOX CASE. 12938

1 or 2 Dks., R.Q.Dk., ~~IRON OR~~ STEEL STEAMER.

~~and Pt. Awng. Dk.~~ (68)

Received at London 15 MAY 1894

State if Report is also sent on the Machinery of the Vessel ARCHGROVE

WRECK SECTION No.

Date of completion of Report 10 May 1894 — Port of Glasgow

No. 12938 Survey held at Bowling — Date, First Survey 6 December 1893 — Last Survey 3 May 1894

On the "Citrine" — Rig Schooner: 3 Masts

TONNAGE under Tonnage Deck	433.75
Do. of Poop	
Do. of Raised Qr. Dk. or Break	85.72
Do. of Bridge House	20.20
Do. of Forecastle	
Do. of Houses on Deck	8.63
Do. of excess of Hatchways	15.46
Do. above Crown of Engine Room	38.19
Gross Tonnage	602.25
Less Crew Space	51.07
Less above Crown of Engine Room	38.19
TONNAGE FOR FEES	512.99
Engine Room	328.60
Navigation Spaces	23.72
Register Tonnage	198.86
...cut on Beam	

ONE ~~OR TWO~~ DECKED VESSEL.

CLASS 100 A 1

RETAIN

	FEET.
Half Breadth (moulded)	14.5
Depth from upper part of Keel to top of Main Deck Beam	12.75
Girth of Half Midship Frame (as per Rule)	25.58
1st Number	53.83
Length	178.63
2nd Number	9615
Proportions—Breadths to Length	6.15
Depths to Length—Main Deck to top of Keel	12.9

Master W. Leitch — WRECK SECTION

Year of appointment { (1) As master in service of owners 1889; (2) As master of this vessel 1894 }

Built at Bowling — No.

When built 1894 Launched 21 April

By whom built Scott & Sons

Owners W. Robertson.

Managers (Where necessary to be entered in Reg. Book)

Residence 15 Gordon St Glasgow

Port belonging to Glasgow

Destined Voyage Coasting — Surveyed while Building, and Afloat, ~~or in Dry Dock~~

LENGTH on Deck as per Rule	Feet. 178	Inches. 4½	BREADTH—Moulded	Feet. 29	Inches. 0	DEPTH—Top of Floors to Main Deck Beams	Feet. 10	Inches. 10	Power of Engines	Horse. 120	No. of Decks with Flat laid 1; No. of Tiers of Beams 1

Dimensions of Ship per Register, Length, 180.0 breadth, 29.1 depth, 10.65. Moulded Depth, ft. 13 ins. 0. Round of Beam 10 inches.

FRAMING.	Inches in Ship.	Inches in Ship.	16ths in Ship.	Inches per Rule	Inches per Rule Or as Approved	16ths per Rule
FRAME, Angles, ~~Z, [or [~~ Bars, for ⅗ length amidships	3½	3	6	3½	3	6
Do. for ⅕ at each end	3½	3	5	3½	3	5
Do. in way of Double Bottoms at Solid Floors	3	3	6	3	3	6
" " at intermdt. Bkts.	3½	3	6	3½	3	6
Distance of Frames from moulding edge to moulding edge, all fore and aft	22			22		
REVERSED FRAME, Angles	3	2½	5	3	2½	5
~~DEEP FRAMING, depth of girder~~						
FLOORS, depth and thickness of Floor Plate ~~at mid line for ⅗ length amidships~~	21		7	21		7
" in way of Engines and Boilers			6			6
" thickness at the ends of vessel						
" depth at ¾ the half breadth, as per Rule	Level on upper edge					
" height extended at the Bilges						
FLOORS & BRACKETS, in Cell Dble Bottoms			5			5
" Solid floors Distance apart	44			44		
CENTRE GIRDER, in Double Bottom, depth and thickness	35		9	35		9
" " Angles, Top	3½	3½	7	3½	3½	7
" " " Bottom	Side bar keel					
SIDE GIRDERS, number and thickness 2 No.			5			5
" Angles	3	3	6	3	3	6
MARGIN PLATE, depth (exclusive of flange) and thickness	24		6	24		6
Angles	3	3	6	3	3	6
INNER BOTTOM PLATING, breadth and thickness of Middle Line Strake	54		6	54		6
" " thickness in Engine and Boiler space	None					
" " " Remainder in Holds			5			5
BEAMS, Main and Raised Quarter Deck, Single Angle, ~~Bulb Angle, Plate or Tee Bulb~~	5½	3	7	5½	3	7
Plate beams at Hatchways	15		6	15		8
" Angles on ~~Upper Edge~~ do.	3	3	6	3	3	6
" Average space... of ordinary beams	22			22		
~~BEAMS, Lower Deck, Single Angle, Bulb Angle, Plate or Tee Bulb~~						
" ~~Angles on Upper Edge~~						
" ~~Average space~~						
~~BEAMS, Hold, Plate or Tee Bulb~~						
" ~~Angles on Upper Edge~~						
" ~~Average space~~						
~~BEAMS, Poop Deck, Angle, Bulb Angle, Plate or Tee Bulb~~						
" ~~Angles on Upper Edge~~						
" ~~Average space~~						
BEAMS, Bridge Deck, Angle, ~~Bulb Angle, Plate or Tee Bulb~~	5½	3	7	5½	3	7
" ~~Angles on Upper Edge~~						
" ~~Average Space~~ Average Space	44			44		
BEAMS, Forecastle Deck, ~~Angle, Bulb Angle, Plate or Tee Bulb~~ Angles	4	2½	6	4	2½	6
" ~~Angles on Upper Edge~~ Beams under windlass	5	3	7	5	3	7
" Average space	22			22		
PILLARS, In 'tween Decks, Size and Spacing	Special beam and girder arrangement as approved					
" Hold " "						
Quarter, 'tween Dks., " "						
" " in Hold " "						
WEB FRAMES, In Fore Body, No. and Spacing	4	Spaced as on plans				
" " " Brdth. & Thickness	22		6	22		6
" No. of Side Stringers " One	22		6	22		6
WEB FRAMES, In E. & B. Space, No. & Spacing	Included in others					
" " " Brdth. & Thickness						
WEB FRAMES, In After Body, No. and Spacing	22 Spaced as on plans		6	22		6
" " " Brdth. & Thickness						
" No. of Side Stringers " One	22		6	22		6
" Size of Angles or Tee Bars to Web Frames	3	2½	6	3	2½	6
BRACKET PLATES to Stringers between Web Frames, Depth and Thickness	20		5	20		5

FORGINGS AND CASTINGS.	Inches in Ship.	Inches per Rule. Or as Approved.
KEEL, Bar or Side Plates depth and thickness	7½ × 7/8	7½ × 7/8
STEM, moulding and thickness	7½ × 2¼	7½ × 2¼
STERN-POST for Rudder do. do.	7½ × 4¼	7½ × 4¼
" for Propeller	7½ × 4¼	7½ × 4¼
MAIN PIECE of Rudder, diameter at head	4¾	4¾
do. at heel	2¾	2¾

RUDDER, how constructed Forged frame. Plate sides

Can the Rudder be unshipped afloat? Yes

KEELSONS AND STRINGERS.	Inches in Ship	Inches in Ship	16ths in Ship.	Inches per Rule	Inches per Rule Or as Approved	16ths per Rule
CENTRE LINE KEELSON, Vertical Plate above floors, ~~Through Plate, or Intercostal Plate~~ (In E & B space)	12		9	12		9
" Rider Plate	8½		9	8½		9
" ~~Bulb Plate to Intercostal Keelson~~						
" ~~Horizontal Plates on Floors~~						
" Angles	4	3	6	4	3	6
SIDE KEELSON, Angles. in E & B space	4	3	6	4	3	6
" Bulb or Plate above floors ~~for~~ lng.	6½		6	6½		6
" ~~Intercostal Plate for length~~						
" ~~Attached to outside plating with Angle~~						
BILGE KEELSON, Angles	4	3	6	4	3	6
" ~~Bulb or Plate above floors for len.~~						
" ~~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	3½	3½	6	3½	3½	6
" ~~Bulb or~~ Intercostal Plate ~~for lng.~~ as on plans	22		6	22		6
" Attached to outside plating with Angle	3½	3½	6	3½	3½	6
Main and Raised Quarter Deck Stringer Plate, breadth and thickness	40		8	40		8
" Angle on ditto	3½ × 3½ × 7			3½ × 3½ × 7		
" ~~Tie Plates fore & aft, outside Hatchways~~						
" ~~Diagonal Tie Plates on Bms., No. of Pairs~~						
" Main Dk* Iron ~~or Steel~~ for whole lng.			6.7.8			6.7.8
" R. Q. Dk* Iron ~~or Steel~~ for whole lng.			6.8			6.8
" ~~Wood Deck, Material & thickness~~						
Lower Deck Stringer Plate, breadth and thickness	22		6	22		6
" Angles on ditto, No. 2/1	3½ × 3½ × 6; 4 × 3 × 6			3½ × 3½ × 6; 4 × 3 × 6		
" ~~Tie Plates, outside Hatchways~~						
" ~~Deck* Material and thickness~~						
~~Hold Stringer Plate~~						
" ~~Angles on ditto, No.~~						
~~Poop Deck Stringer Plate, breadth & thickness~~						
" ~~Angle on ditto~~						
" ~~Tie Plates~~						
" ~~Deck, Material and thickness~~						
Bridge Deck Stringer Plate, brdth & thickness	18		6	18		6
" Angle on ditto	3 × 3 × 6			3 × 3 × 6		
" ~~Tie Plates~~						
" Deck, Material and thickness Y.P.	3			3		
Forecastle Deck Stringer Plate, brdth & thckns	30		6	30		6
" Angle on ditto	3 × 3 × 6			3 × 3 × 6		
" ~~Tie Plates~~ Iron deck			5.6			5.6
" ~~Deck, Material and thickness~~						

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

BULKHEADS.	Number. In Vessel.	Number. Per Rule.	Thickness. 16ths or 20ths.	STIFFENERS. Horizontal. Inches.	Vertical. Inches.	Spacing Inches.	Single or Double Frames.	Height up.
W.T. BULKHEADS	3	3	9/16	3½ × 3 × 4/16; 3½ × 3 × 4/16	3½ × 3 × 4/16; 3½ × 3 × 4/16	40; 30	dble	upper
PARTITION "	1	Bunker Bkd.						
LONGITUDINAL "	✓							

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

Form No. 1A.

STRAKES.	PLATING. AS IN SHIP. AMIDSHIP. Breadth.	Thickness.	FORWARD. Thickness.	AFT. Thickness.	PER RULE OR AS APPROVED. AMIDSHIP. Breadth.	Thickness.	RIVETING. EDGES. Single or Double.	Breadth of Lap.	RIVETS. Diam.	RIVETS. Spacing cr. to cr.	BUTTS. Double or Treble and for what Length.	RIVETS. Diam.	RIVETS. Spacing cr. to cr.	STRAPS. Breadth.	STRAPS. Thickness.	IF LAPPED. Breadth.	IF LAPPED. For what Length.
	Inches.	16ths or 20ths	16ths or 20ths	16ths or 20ths	Inches.	16ths or 20ths		Inches.	Inches.	Inches.		Inches.	Inches.	Inches.	16ths or 20ths	Inches.	Feet.
Side Bar ~~Flat Plate~~ Keel (If Bar Keel, state Riveting)							dble		1	5							
Garboard or A Strake	40	11	11	11	32	11	dble	4½	3/4	3½	dble	3/4		11¾	11	✓	✓
B (State actual thickness in way of Double Bottom.)	41	9	9	8	41	9	do	4½	3/4	3½	treble	3/4		14¾	9	✓	✓
C	52	8	8	8	52	8	do	4½	3/4	3½	do	3/4		14¾	8	✓	✓
D	45	10	10	8	45	10	do	4½	3/4	3½	do	7/8		16¾	12	✓	✓
E	49	9	7	7	49	9	do	4½	3/4	3½	do	7/8		16¾	11	✓	✓
F	41	8	7	7	41	8	Single	2½	3/4	3½	do	3/4		14¾	8	✓	✓
G	50	7	7	6	50	7	dble	4½	3/4	3½	do	3/4		14¾	7	✓	✓
H	40	12	10	10	38	12					do	7/8		16¾	14	✓	✓
~~J~~																	
~~K~~																	
~~L~~																	
~~M~~																	
~~N~~																	
~~O~~																	
~~P~~																	
~~Doubling of Flat Plate Keel~~																	
Doubling (Length and thickness) ~~of Bilges~~																	
of Sheerstrakes	27	7			27	7											
~~of Strake below~~	20 ft long																
~~Poop Sides~~																	
Raised Quarter Dk. Sides	42	9.8.6	and	16 ft of 10/20													
Bridge Sides		9															
Forecastle Sides		6															
Lengths of Plating	7 Frame Space																

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, outside Plating, &c.? Siemens Martin Steel. Frames Dalzell. Reverse frames, Keelsons & beams. Lanarkshire. Shell. Clydebridge. Floors. bulkhd. casing of Iron Stockton Malleable. Decks. iron. W. Hartlepool

Main Stringer Plate { **Butts,** treble riveted for ½ length amidship. **Straps,** single, ~~double or overlapped for~~ whole length amidship

Butts of Bilge & Side Stringers, and Tie Plates, treble ~~or~~ and double riveted. double W3

Inner Bottom Plating, riveting of **Edges** Single 3 **Butts** single

Centre Girder Butts, dble strapped double riveted. **Keelson Butts,** treble riveted.

Frames, riveted through Plates with 3/4 in. Rivets, about 5/4 apart.

Rivets, state whether of Iron or Steel Iron

FRAMES extend in one length from Keel to margin plate and thence to Gunwale

REVERSED FRAMES on floors and frames extend from Keel to margin plate on alternate frames and from margin plate to side stringer and deck alternately. Also in way of R.Q.D to hold beam stringer & deck alternately.

MASTS, SPARS, &c.

		Material.	Total length.	Diameter and Thickness. At Partners.	Heel.	Hounds.	Head.	No. of Plates in round.	Angles. Number.	Size.	Riveting. Seams.	Butts.
Lower Masts	Fore / Main / Mizen	P. P. Poles. Good										

Bowsprit None

Topmasts, Yards and Remainder of **Spars** P.P. Good.

Rigging, Material and Size, **Shrouds** 3" Galvd steel wire . **Stays** 3¼. 2½ galvd steel wire

Sails. 1 Suit of Sails and the following spare sails ✓

EQUIPMENT No. 10521 **LETTER** i . **TONNAGE FOR TRAWLERS** ✓ **U.Dk.**

ANCHORS.

Number of Certificate.	Anchors.	Weight, ex Stock Cwts.	qrs.	lbs.	Weight of Stock. Cwts.	qrs	lbs.	Test, per Certificate. Tons.	Cwts.	qrs.	lbs.	Weight Req. by Rule Cwts.	qrs.	lbs.	Description of Anchor.	Makers. (If Patent state Name of Patentee.)	Where and when tested and Superintendent.
26049	1st Bower	15	2	15	Stockless			17	3	0	14	15	0	0	Wasteney's Smith	John Spencer & Son	R.W. Commrs 12/3/94 J. Horton
26014	2nd	12	0	7	3	0	7	13	19	2	21	12	0	0	Trotman	not stated	do. 6/3/94 do
26015	3rd	10	1	7	2	2	14	12	6	2	7	10	1	0	do	do.	do. 6/3/94 do
	Collective weight	38	0	1								37	1	0			
26016	Stream	4	0	0	1	0	0	6	7	2	0	4	0	0	do.	do	do 6/3/94 do
26017	Kedge	2	0	0	0	2	0	4	10	0	0	2	0	0	Cowdson	do	do 6/3/94 do
	2nd Kedge																

CHAIN CABLES.

Number of Certificate.	Fathoms.	Size.	Test per Certificate. Tons.	Weight of Chain Cable. Supplied.	Per Rule.	Fathoms and Size Per Rule.	Description.	Makers of Cables.	When and where tested, and Superintendent.
10833	195	Calliper 1¼	48.2.28	157.1.2	141.0.16	195 . 1¼	Stud link	S. Taylor & Sons	R.W. Commrs 12/3/94 J.H. Horton
~~Iron Stream Chain~~ or Steel Wire	60	3	18¾			60 . 3	Steel wire	J.J. Stewart & Co	Glasgow 9/4/94

HAWSERS AND WARPS.

	Material.	Fathoms.	Size.	Breaking Test of Steel Wire Towline.	Fathoms and Size Per Rule.
Towline		75	8½		75 . 8½
Hawser		90	6½		90 . 6½
Warp		90	5		
	2	90	4½		

Boats 3

Pumps, Number 3 Hand Pumps and engine Suctions, or Diameter of Barrel and Tail Pipe 5" barrel. 2½ tail pipe } also one of 3" barrel & 1½ pipe }

Windlass is H.R. Reid & Sons Patent. approd **Capstan** Do

Engine Room Skylights.—How constructed? Iron Casing. Teak Skylight over.

What arrangements for deadlights in bad weather? Bulls eyes in side of casing and tarpaulin over skylight

Coal Bunker Openings.—How constructed? Framed Hatchway How are lids secured? Solid latches Height above deck? 7 ft above R.Q.D

Number of **Scuppers,** and number and dimensions of **Freeing Ports, &c.** 2 Scuppers and 3 ports in bulwarks. each 1'6" x 2'6" -

Ceiling in Holds, thickness and material 2½" P.P. & 1½" A. Elm doubling. **Ceiling 'tween Decks,** thickness and material 2" Spacing of P.P. above [illegible]

Cargo Hatchways.—How formed? Coamings of iron 30" x 6/16 **Hatches.**—If strong and efficient? Yes. Solid 3"

State size **No. 1 Hatch** (Forward) 7.4" x 11.10" **No. 2 Hatch** 29.4" x 14.0" **No. 3 Hatch** 19.11" x 12.0" **No. 4 Hatch** ✓

Number of **Web Plates, Shifting Beams,** and **Fore** and **Afters** to each Hatch 2 web plates Beams to No 2 and one web plate to No 3 also three fore and after in each. **No. of Breasthooks** 3 **No. of Crutches** deep floors

Bulwarks, height above deck and description 51" x 4/16 bulwarks of iron. Main Rail, material and size Channels 6" x 3" x 3. and cap [illegible]

The above is a correct description.

Builder's Signature Scott & Sons *Surveyor's Signature* S. Thearle

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

Form No. 1A.

LR-FAF-TO4-83 1/2

Correspondence.—State dates and initials of letters respecting this case (*Reference should be made to any correspondence connected with the case*)
17/8/93. 29/8/93. 5/9/93. 23/11/93. 5/12/93 20/12/93

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

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 the plating? No

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

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

This is a well deck screw steamer, built in accordance with the approved plans attached hereto and with the Rules generally.

Her frames, reverse frames, beams and shell plating are of steel and the floors, bulkheads, tank top, double bottom and deck plating are of iron.

The pumps and the several compartments of double bottom have been tested and found satisfactory.

She is a sister vessel to the S.S. "Opal". (Glasgow Report No 12713) by same builders, for same owners.

Survey report kept back for tonnage particulars

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

PARTICULARS FOR RECORD in the REGISTER BOOK.—Length of Poop ✓ ft., R.Q.D. or Break 89¾ ft., Bridge Dk. 11 ft., F'castle 36¾ 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-dk iron

Official No. ; Signal Letters — .

How are the surfaces preserved from oxidation? Inside Paint and Portland Cement Outside Black Varnish

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

Where fitted.	Length. Feet.	Water Capacity. Tons.	Where fitted.	Length. Feet.	Water Capacity. Tons.
Double bottom, aft,	✓	✓	Fore peak tank,		22
Double bottom, forward, cellular	95	140	After peak tank,	✓	✓
Double bottom, under Engines and Boilers,	✓	✓	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.

Order for Special Survey No. 2409
Date 19th August 1893
Order for Ordinary Survey No. ✓
Date ✓
No. 104 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	1893. Dec 6. 14. 18. 19. 22. 27. 29
2nd.	On the plating during the process of riveting	1894. Jan 5. 11. 17. 24. 26. 30. Feby 2. 5. 8. 15. 27.
3rd.	When the beams were in and fastened and before the decks were laid	March 5. 8. 12. 15. 19. 21. April 4. 10. 18. 20
4th.	When the ship was complete, and before the plating was finally coated or cemented	May. 2. 3.
5th.	After the ship was launched and equipped	

Total No. of Visits 30

The amount of Entry Fee ......£ 3 : " : "
Special......£25 : 13 : "
Certificate* £ " : " : "
Travelling Expenses, if any £ " : " : "

Fees applied for, 10/5/ 1894
Received by me, 11/5/ 1894

* *Certificate to be sent to* Glasgow

I am of opinion this Vessel should be Classed ✠ 100 A 1 "Steel"
With, or without Freeboard, as condition of Class Deck. Bulkd & dble bottom Iron

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

Committee's Minute FRI 18 MAY 1894
Character assigned ✠ 100A1 Steel
1 Dk (Iron)
Well dk.

a c l
+ LMC 5.94

The Vessel appears to have been built in accordance with the Rules and the approved plans, and it is submitted she is eligible to be classed 100 A1 ("Steel") as recommended.

✠ 100 A1 ("Steel")
1 Dk (Iron) "Well deck"
N.B. = Cell DB &c. (particulars above)
Conc.

C. K. J.
15/5/94

attached

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

Hull Certificate