

IRON SHIP.

27263

18

Survey held at *Dunbarton*

Date, First Survey *2nd Sept 70*

Last Survey *15th April*

Screw Steamer **Clan Stuart**

Master

AGE under 1910.54
on Deck 119.00
of Poop, 33.32
to of Houses 109.00
on Deck 39.96
to of Forecastle 2093.70
Cross Tonnage 60.74
less Crew Space 2025.
less Engine Room 669.80
Register Tonnage 1354.90
as cut on Beam

ONE, OR TWO DECKED, THREE DECKED VESSEL.
SPAR, OR AWNING-DECKED VESSEL.
Feet.
HALF BREADTH (moulded)... 17.25
DEPTH from upper part of Keel to top of Upper Deck Beams 26.46
GIRTH of Half Midship Frame (as per Rule) 59.25
1st NUMBER 82.96
1st NUMBER, if a THREE-DECKED VESSEL 75.96
[deduct 7 feet]
LENGTH 303.5
2nd NUMBER 23053
PROPORTIONS—Breadths to Length 8.76
Depths to Length—Upper Deck to Keel 11.84
Main Deck ditto 16.4

Built at *Dunbarton*
When built *1879* Launched *22nd July*
By whom built *A. McMillan & Co.*
Owners *Cayzer Irvine & Co.*
Port belonging to *3rd Churchyard Liverpool*
Destined Voyage *Chy and*
Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule 303.5 Feet. Breadth—Moulded 34.5 Feet. DEPTH top of Floors to Upper Deck Beams 24.4 Feet. Do. do. Main Deck Beams 16.4 Feet. Power of Engines 210 Horse. N° of Decks with flat laid 2 N° of Tiers of Beams 3

	Inches in Ship	Inches per Rule
KEEL, depth and thickness	10x2 1/2	10x2 1/2
STEM, moulding and thickness	10x2 1/2	10x2 1/2
STERN-POST for Rudder do. do.	10x5 1/2	10x5 1/2
" " for Propeller	10x5 1/2	10x5 1/2
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	(Class 100A)
FRAMES, Angle Iron, for 3/4 length amidships	5x3	5x3
Do. for 1/2 at each end	5x3	5x3
REVERSED FRAMES, Angle Iron	3x3	3x3
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	2 1/2	2 1/2
" thickness at the ends of vessel	7	7
" depth at 3/4 the half-bdth. as per Rule	1 1/2	1 1/2
" height extended at the Bilges	4 1/2	4 1/2
BEAMS, Upper, Span, or Awning Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	5 1/2 x 3	5 1/2 x 3
Single or double Angle Iron on Upper edge	24	24
Average space	10	10
BEAMS, Main, or Middle Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	8 1/2 x 3	8 1/2 x 3
Single, or double Angle Iron, on Upper Edge	3 x 3	3 x 3
Average space	40	40
BEAMS, Lower Deck, Hold, or Orlop Single or double Ang. Iron, Plate or Tee Bulb Iron	9 1/2 x 3	9 1/2 x 3
Single or double Angle Iron on Upper Edge	4 x 4	4 x 4
Average space	10	10
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	2 1/2 x 13	2 1/2 x 13
" Rider Plate	13	13
" Bulb Plate to Intercoastal Keelson	6 x 4	6 x 4
" Angle Irons	6 x 4	6 x 4
" Double Angle Iron Side Keelson	8 1/2 x 4	8 1/2 x 4
" Side Intercoastal Plate	6 x 4	6 x 4
" do. Angle Irons	6 x 4	6 x 4
" Attached to outside plating with angle iron	3 1/2 x 3 1/2	3 1/2 x 3 1/2
BILGE Angle Irons	6 x 4	6 x 4
" do. Bulb Iron	8 1/2 x 4	8 1/2 x 4
" do. Intercoastal plates riveted to plating for 1/2 length	6 x 4	6 x 4
BILGE STRINGER Angle Irons	6 x 4	6 x 4
Intercoastal plates riveted to plating for 1/2 length	6 x 4	6 x 4
SIDE STRINGER Angle Irons	6 x 4	6 x 4

	Inches in Ship	16ths in Ship	Inches per Rule	16ths per Rule
Flat Keel Plates, breadth and thickness	36	12	36	12
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	11	-	11	-
" of doubling at Bilge, or increased thickness, and length applied	40	14	40	14
" in up. part of Bilge to l.r. edge of Sh'rstrake.				
" Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.				
" Up. or Spar Dk. Sh'rstrake, brdth & thickness				
Butt Straps to outside plating, breadth & thickness	19 9/16	15	19 9/16	15
Lengths of Plating	6 frames		5 frames	
Shifts of Plating, and Stringers	6 frames		2	
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	44	9	44	9
Angle Iron on ditto	44	9	44	9
Tie Plates fore and aft, outside Hatchways	6 1/2		6 1/2	
Diagonal Tie Plates on Beams No. of Pairs	6 1/2		6 1/2	
Planksheer material and scantling	Teak 12x12			
Waterways do. do.	6x6			
Flat of Upper Deck do. do.	3 1/2		3 1/2	
How fastened to Beams	Double riveted			
Stringer Plate on ends of Main or Middle Deck	53	10	53	10
Beams, breadth and thickness	11	10	11	10
Is the Stringer Plate attached to the outside plating?	Yes			
Angle Irons on ditto, No.	2		44	9
Tie Plates, outside Hatchways	15	10	15	10
Diagonal Tie Plates on Beams, No. of pairs	6 1/2			
Waterways materials and scantlings	6x6			
Flat of Middle Deck do. do.	3 1/2		3 1/2	
How fastened to Beams	Double riveted			
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	39	9	39	9
Is the Stringer Plate attached to the outside plating?	Yes			
Angle Irons on ditto, No.	3		44	9
Stringer or Tie Plates, outside Hatchways	15	10	15	10
Flat of Lower Deck	2 1/2		2 1/2	
Ceiling betwixt Decks, thickness and material	2 1/2		2 1/2	
" in hold do. do.	2 1/2		2 1/2	
Main piece of Rudder, diameter at head	7 1/2		7 1/2	
do. at heel	3 1/4		3 1/4	
Can the Rudder be unshipped afloat?	Yes			
Bulkheads No.	3			
" Height up	8 ft 6 in			
" How secured to sides of ship	Double frames			
" Size of Vertical Angle Irons	3x3			
" Are the outside Plates doubled two spaces of Frames in length?	Yes			

Transoms, material. Knight-heads. Hawse Timbers. *Plating doubled*
Windlass *Iron Patent* Pall Bitt *C*
The FRAMES extend in one length from *Keel* to *Deck Stringer* Riveted through plates with *7/8* in. Rivets, about *6* apart.
The REVERSED ANGLE IRONS on floors and frames extend *from* middle line to *above middle deck* and to *upper deck* or alternately
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 *1/2* 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 *7/8* in. diameter, averaging *3 1/4* ins. from centre to centre.
" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 1/4* ins. from centre to centre.
" Butts of *3* Strakes at Bilge for *2* length, treble riveted with Butt Straps *7/8* thicker than the plates they connect.
" Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets *7/8* in. diameter, averaging *3 1/4* ins. from cr. to cr.
" Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 1/4* 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 *1/2* length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.
" Butts of Main Stringer Plate, treble riveted for *1/2* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *1/2* length.
" Breadth of laps of plating in double riveting *8 1/2* Breadth of laps of plating in single riveting
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Not fully riveted Herest double riveted*
Waterway, how secured to Beams *Interwoven* (Explain by Sketch, if necessary.)
Beams of the various Decks, how secured to the sides? *Double hooked pieces* No. of Breasthooks, *two* Crutches, *two*
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Westmarsh*
Manufacturer's name or trade mark, *Westmarsh* *Stockton* *Westmarsh* *Stockton* *Westmarsh* *Stockton*
The above is a correct description.
Builder's Signature, *Arch W. Millan* Surveyor's Signature, *Arch W. Millan*
Surveyor to Lloyd's Register of British and Foreign Shipping.

110484-0117

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed where practicable*
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? *Very few*

23263 *Ln*

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

State also Length and Diameter of Lower Masts and Bowsprit
Foremast - 70.5 x 23 3/4 plates in section 6 1/2 thick butts put in the rest with the edges double
Mainmast - 72.0 x 23 3/4 riveted double at butts
Foremain lower yards 66 x 16 1/2 plates in section 5 1/2 thick butts both edges outside riveted
Plates tested per rule Brand of Iron Corbett

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W't req'd per Rule.	Test req'd per Rule.
N ^o .	SAILS.	CABLES, &c.										
	Fore Sails,	Chain	135	1 1/16	270 1 1/16	59 1/2	Bowers	4476	32.1.4	50.0.0.14	32	30 1/2
	Fore Top Sails,		135		LPHT No 4694	59 1/2		4477	32.0.7	50.4.1.14	32	
	Fore Topmast Stay Sails		270 1/4		LPHT No 4694	59 1/2		4478	27.1.0	26.11.1.0	27 1/4	
	Main Sails,	Imp Strm Cbl	45	1 1/2	LPHT No 4694	59 1/2		4479	10.2.2.0	12.13.0.14	10 1/2	12 1/2
	Main Top Sails,	Hawser ...	30		LPHT No 7472	59 1/2		7377	5.0.25.7	11.5.14	5 1/4	7 1/2
	and	Towlines ...	90	1 1/2		90 11/12	Stream	7378	2.2.0.0	5.0.0.0		
		Warp ...	90	1 1/2		11	Kedges				2 1/2	5
		quality	good	6 1/2 3 1/2 3 1/2								

Standing and Running Rigging *Iron Stays* sufficient in size and *good* in quality. She has *2 life long* Boats and *4 others*
The Windlass is *Iron Patent* Capstan *Good* and Rudder *Good* Pumps *Good*
Engine Room Skylights. How constructed? *at top of iron house* How secured in ordinary weather? *by bolts*

What arrangements for deadlights in bad weather? *Gratings and tarpaulins*
Coal Bunker Openings. How constructed? *this upper deck* How are lids secured? *by bolts* Height above deck? *flush*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *6 Scuppers 8 ports & 2 mowing pipes on each side*
Cargo Hatchways. How formed? *for coaling*

State size Main Hatch *23' 10" x 9' 9"* Forehatch *7' 10 1/2" x 8' 11"* Quarter hatch *11' 11 1/2" x 9' 9"*
If of extraordinary size, state how framed and secured? *2 plate beams in main hatch at upper deck*
What arrangement for shifting beams? *2 bulk beams in hatch at middle deck*
Hatches, If strong and efficient? *yes*

Order for Special Survey No. <i>155</i>	1st. On the several parts of the frame, when in place, and before the plating was wrought	<i>Sept 2. 9. 24. 27 Oct 1. 4. 8. 14. 17. 25. 27. 30</i>
Date <i>May 29/78</i>	2nd. On the plating during the process of riveting	<i>Nov 4. 7. 14. 18. 21. 28. Dec 2. 5. 9. 12. 19. 23. 27</i>
Order for Ordinary Survey No. <i>156</i>	3rd. When the beams were in and fastened, and before the decks were laid...	<i>Jan 1. 16. 20. 23. 27. 30. Feb 3. 6. 10. 13. 17. 20. 24. 27</i>
Date <i>June 1/78</i>	4th. When the ship was complete, and before the plating was finally coated or cemented...	<i>Mar 3. 10. 18. 20. 26. 28. Apr 1. 15. 18. 19</i>
No. <i>216</i> in builder's yard.	5th. After the ship was launched and equipped	

General Remarks (State quality of workmanship, &c.) *This is a sister vessel to 'Clan Ranald' Glasgow No 4000 and is built in accordance with the section and plans which accompany that report. She is fitted with a water-tallent tank up to the middle deck. Below the machinery space for the length of 10 feet and aloft the engines for the length of 20 feet extending to the height of the hold beams. Both compartments tested per rule and previous to launching. During the testing of the deeper ballast tank of this vessel the bulkheads showed signs of curvature in this account of fine. 8 aft stays of 3" round iron were fitted with strong plates riveted to the vertical bulk bars on the bulkheads. As in the sister ship. diagonal stays are fitted from the main deck coming to the hold beams strainer in the engine hatch. as a shifting beam could not be fitted at the upper deck hatch.*

State if one, two, or three decked vessel, or if spar, or acing decked; and the lengths of poop, fore-castle, or raised quarter deck, and the length of double, or part double bottom.

How are the surfaces preserved from oxidation? Inside *Cement and Paint* Outside *Paint*
I am of opinion this Vessel should be Classed *+ 100 A S*

The amount of the Entry Fee ... £ 5 : : : is received by me, *21st*
Special ... £ 75 : 12 : 6 April 1879
Certificate ... *Printed*
(Travelling Expenses, if any, £ 8. 8. =).

Committee's Minute *25th April 1879*
Character assigned *100 A*
Lloyd's Register
Foundation