(482)

IRON SHIP. 22749

No. 4800 *Survey held at* Dunbarton *Date, First Survey* June 17th 78 *Last Survey* 19th February 1879

On the Screw Steamer "Clan Ranald" *Master* —

TONNAGE under Tonnage Deck	1917.91	~~ONE, OR TWO DECKED,~~ THREE DECKED VESSEL. ~~SPAR, OR AWNING DECKED VESSEL.~~		Built at Dumbarton
~~Ditto of Third, Spar, or Awning Deck~~		**HALF BREADTH** (moulded)	17.25	When built 1878 Launched 24th Dec
Ditto of ~~Poop or~~ Raised Qr. Dk.	20.37	**DEPTH** from upper part of Keel to top of Upper Deck Beams	26.12	By whom built A McMillan & Son
Ditto of Houses on Deck	106.10	**GIRTH** of Half Midship Frame (as per Rule)	39.25	
Ditto of Forecastle	39.68	**1st NUMBER**	82.96	Owners Cayzer Irvine & Co, 3 Old Church Yard Lpool
Gross Tonnage	2092.06	**1st NUMBER,** if a **THREE-DECKED VESSEL** [deduct 7 feet]	75.96	Port belonging to Glasgow
Less Crew Space	66.09	**LENGTH**	303.5	
for fees	2025.97	**2nd NUMBER**	23053	Destined Voyage Cly
Less Engine Room	669.46	**PROPORTIONS**—Breadths to Length	8.76	~~Is~~ Surveyed while Building, and Afloat, ~~or in Dry Dock.~~
Register Tonnage as cut on Beam	1356.51	Depths to Length—Upper Deck to Keel	11.84	
		Main Deck ditto	16.4	

Official Number

PLANS

LENGTH on deck as per Rule	Feet. 303	~~Inches.~~ 5	**BREADTH**—Moulded	Feet. 34	~~Inches.~~ 5	**DEPTH** top of Floors to Upper Deck Beams / Do. do. Main Deck Beams	Feet. 24 / 16	~~Inches.~~ 4 / 6	Power of Engines	Horse. 210

N°. of Decks with flat laid 2
N°. of Tiers of Beams 3

Dimensions of Ship per Register, length 305 breadth 34. 8 depth 24. 4

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	10 × 2¾	10 × 2¾
STEM, moulding and thickness	10 × 2¾	10 × 2¾
STERN-POST for Rudder do. do.	10 × 5½	10 × 5½
" " for Propeller	10 × 5½	10 × 5½
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24 (Class 100A)

	Inches. In Ship.	Inches. In Ship.	16ths. In Ship.	Inches per Rule	Inches per Rule	16ths per Rule
FRAMES, Angle Iron, for ⅗ length amidships	5	3	8	5	3	8
Do. for ⅕ at each end	5	3	7	5	3	7
REVERSED FRAMES, Angle Iron	3	3	7	3	3	7
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	23½	–	9	23½	–	9
" thickness at the ends of vessel	–		7	–	–	7
" depth at ¾ the half-bdth. as per Rule	11¾			11¾		
" height extended at the Bilges	47			47		
BEAMS, Upper, ~~Spar, or Awning~~ **Deck** Single ~~or d'ble~~ Ang. Iron, ~~Plate or Tee Bulb Iron~~	5½	3½	8	5½	3	8
~~Single or double Angle Iron on Upper edge~~						
Average space... at each frame				–		
BEAMS, ~~Main, or~~ **Middle Deck** ~~Single or d'ble Ang. Iron,~~ Plate ~~or Tee~~ Bulb Iron	8½	–	8	8½	–	8
~~Single, or~~ double Angle Iron, on Upper Edge	3	3	7	3	3	7
Average space	48			48		
BEAMS, ~~Lower Deck,~~ **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... 10 frames and as approved (Coaming Plate)	9		8	9	–	8
KEELSONS Centre line, single ~~or double~~ plate, ~~box, or Intercostal,~~ Plates	23¾		13	23½		13
" Rider Plate	13		13	13		13
" ~~Bulb Plate to Intercostal Keelson~~	~~8½~~		~~8~~			
" Angle Irons	6	4	9	6	4	9
" Double Angle Iron Side Keelson Bulb 1 length	8½	–	8	8½	–	8
" Side Intercostal Plate	–		9	–	–	9
" do. Angle Irons	6	4	9	6	4	9
" Attached to outside plating with angle iron	3½	3½	8	3½	3½	8
BILGE Angle Irons	6	4	9	6	4	9
" do. Bulb Iron... ⅗ lengths	8½	–	8	8½	–	8
" do. Intercostal plates riveted to plating for ½ length	–	–	9	–	–	9
BILGE STRINGER Angle Irons	6	4	9	6	4	9
Intercostal plates riveted to plating for ⅗ length.	–	–	9	–	–	9
~~SIDE STRINGER Angle Irons~~						

	Inches. In Ship.	16ths. In Ship.	Inches. per Rule	16ths per Rule
~~Flat Keel Plates, breadth and thickness~~				
PLATES in Garboard Strakes, breadth and thickness	36	12	36	12
ness from Garboard to ~~upper part of Bilges~~ " ~~of doubling at Bilge, or increased thickness, and length applied~~		11		11
" ~~fm up. part of Bilge to~~ lr. edge of Sh'rstrake	40	14	40	14
" Main Sheerstrake, breadth and thickness ~~of d'bling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake.~~				
" ~~Up. or Spar Dk Sh'rstrake, brdth & thickns~~				
Butt Straps to outside plating, breadth & thickness	19 9½	16. 9	19 9½	14 8
Lengths of Plating	6 frames			
Shifts of Plating, and Stringers	2 frames			
Gunwale Plate on ends of ~~Awning, Spar, or~~ Upper Deck Beams, breadth and thickness	44	9	44	8
Angle Iron on ditto	4 4	9	4 4	8
Tie Plates fore and aft, outside Hatchways	Iron deck –			
~~Diagonal Tie Plates on Beams No. of Pairs,~~	6 to 5			6 5
Planksheer material and scantling	Teak. Margin planks			–
Waterways do. do.	Gutter Waterway			
Flat of Upper Deck do. do.	3½			3½
How fastened to Beams	Galvanised bolts			
Stringer Plate on ends of ~~Main or~~ Middle Deck Beams, breadth and thickness	53 / doubling approved 11	10 / 10	53	10 / 10
Is the Stringer Plate attached to the outside plating?	Yes		–	
Angle Irons on ditto, No. 2	4. 4	9	4 4	9
Tie Plates, outside Hatchways	15	10	15	10
~~Diagonal Tie Plates on Beams, No. of pairs~~				
Waterways materials and scantlings	P Pine			
Flat of Middle Deck do. do.	Y.P. 3½		3½	
How fastened to Beams	Galvanised bolts			
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 6 × 4 × 9	4 4	9	4	4. 9
~~Stringer or Tie Plates, outside Hatchways~~				
~~Flat of Lower Deck~~				
Ceiling betwixt Decks, thickness and material	Battens			
" in hold do. do.	2½	P.P.	2½	
Main piece of Rudder, diameter at head	7½		7½	
do. at heel	3¾		3¾	

Can the Rudder be unshipped afloat? Yes
Bulkheads No. 5 Thickness of 6/16 — 6
" Height up Fore to upper deck the rest to middle deck
" How secured to sides of ship Double frames.
" Size of Vertical Angle Irons 3 × 3 × 7 and distance apart 30 ins.
" 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

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 U Deck Stringer 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 in. diameter, averaging 5½ 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 3¾ ins. from centre to centre.

" **Butts from Keel to turn of Bilge,** worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3¾ ins. from centre to centre.

" **Butts of** 3 Strakes at Bilge for ½ length, treble riveted with Butt Straps 1/16 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 3¾ ins. from cr. to cr.

" **Butts from Bilge to Main Sheerstrake,** worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3¾ 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 ½ length.

" Breadth of laps of plating in double riveting 5¼ Breadth of laps of plating in single riveting

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Part treble formula the rest double riveted

Waterway, how secured to Beams Gutter waterway (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? Forged bracket knees No. of Breasthooks, five Crutches, three

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Westmorck Crossett

Manufacturer's name or trade mark, "Westmorck" "Crossett"

The above is a correct description.

Builder's Signature, A McMillan & Son *Surveyor's Signature,* W. [illegible]

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

IRON482-0471

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

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 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 22749 Ire

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 Diameters & thickness as approved per Secretary's letter 4.11.78

Foremast 78' 3" x 23" } 3 Plates in section 6&5/16 thick butts part treble riveted the rest and edges
Mainmast 72' 1" " } double riveted with doublings at partners

Fore & main lower yards 66' x 16" 2 Plates in section 5&4/16 thick butts treble - edges single riveted
Plates tested as per rule

NUMBER for EQUIPMENT ~~26056~~ 25170 / 4570

Nº.	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.
One	Fore Sails,	Chain	135.	1 15/16	82 3/4 / 59 1/2	270. 1 13/16	82 3/4 / 59 1/2
Suit	Fore Top Sails,	(State Machine where Tested, Date, & name Suprintndt.)	LPHT. No 4053 dated 29.11.78 ERS				
	Fore Topmast Stay Sails		135.	1 13/16	82.15 / 59.2.2		
	Main Sails,		270. LPHN. No 14307 dated 30.11.78. DSL				
	Main Top Sails,	~~Hmpn~~ Strm Cbl	75	1 1/8	34.2.2 / 22.15.0	75 1 1/8	34 1/8 / 22 3/4
and		Hawser	LPHN. No 15330 dated 21.11.78. DSL				
		Towlines ...	90	10		90 11.12	
		Warp	"	8		" 11	
		quality Good	"	7 / 6 / 5 / 3		" 7	

ANCHORS.	Nº.	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Test req'd per Rule.
Rodgers Bowers LPHT.	4353	32.3.0	30.13.3	32.0.0	30 2/20
"	4354	32.1.7	30.8.0.14	32.0.0	30 2/20
Teti "	4352	27.0.0	26.7.2.0	27.1.0	26 10/20
(State Machine where Tested, Date, & name of Suprintndt.) dated 28.11.78 signed E.R. Smith					
Rodgers	4339	10.1.12 / 12.5.12	12.6.2.7	13	12 8/20
Stream ...	4338	5.1.10 / 6.3.0	7.16.1.0	6 1/2	7 11/20
Kedges ...	4337	2.2.9 / 3.1.7	5.2.20 dated 25.11.78 ERS	3 1/4	5

Standing and Running Rigging Wire & hemp sufficient in size and Good in quality. She has 2 life Long Boat and 4 others

The Windlass is Iron patent Capstan Good and Rudder Good Pumps Good

Engine Room Skylights.—How constructed? On 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? Thro' 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. 5 Ports and 2 mooring pipes on each side

Cargo Hatchways.—How formed? Iron comings

State size **Main Hatch** 23' 10" x 9' 11" Forehatch 7' 10 1/2" x 9' 11" Quarterhatch 11' 11 1/2" x 9' 9"

If of extraordinary size, state how framed and secured } 2 Plate beams in main H at upper deck & bulb
What arrangement for shifting beams? } beams at middle deck

Hatches, If strong and efficient? Yes

Order for Special Survey No. 1344	DATES of Survey held while building as per Section 18.	1st. On the several parts of the frame, when in place, and before the plating was wrought	June 17. 27. July 4. 9. 18. 23. 31 Aug 8. 9. 12
Date May 29/78		2nd. On the plating during the process of riveting	15. 19. 28. Sept 2. 5. 9. 12. 24. 27 Oct 1. 4. 8. 14. 17
Order for Ordinary Survey No. –		3rd. When the beams were in and fastened, and before the decks were laid	25. 28. 31. Nov 4. 7. 12. 14. 18. 21. 28. Dec 2. 5. 9
Date –		4th. When the ship was complete, and before the plating was finally coated or cemented	12. 19. 23. 27. 1878. Jany 8. 24. 31.
No. 215 in builder's yard.		5th. After the ship was launched and equipped	Feby 4. 7. 8. 11. 14. 18. 19. 1879.

General Remarks (State quality of workmanship, &c.) The Workmanship is good. She is built in accordance with the appended approved midship section and plans. She is fitted with a Water ballast tank between the Bunkers and the main hold and another next aft of the engines. The former one was tested per rule previous to the vessel being launched. it is 5 spaces of frames (10 feet) in length and extends to the height of the middle deck. The after Water ballast compartment is 20 feet in length and extends to the height of the hold beams. This compartment was tested per rule after the vessel was launched. In testing the forward tank of the sister vessel not yet launched the bulkheads showed signs of curvature under pressure. On this account the Builders approved of additional stays being fitted in this vessel as shown dotted on the fore & aft view of the Water ballast plan, there are 6 of these stays below and 3 above the fore & aft beam, 3" round iron with strong palms riveted to the vertical bulb bars. The fitting of a shifting beam near engines was not practicable, diagonal stays are fitted to main deck & engine casing. Midship house & after house adjoining poop 55' 8" x 20' 5"

~~State if one, two, or~~ three decked vessel, ~~or if spar, or awning decked~~; and the lengths of poop 73 feet, forecastle 36 feet, ~~or raised quarter deck, and the length of double, or part double bottom.~~ for the engine hatch

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

I am of opinion this Vessel should be Classed ✠ 100 A1

The amount of the Entry Fee ... ...£ 5 : " : " is received by me, } Feb 19th
Special ... ...£ 75 : 13 : " Feby 1879 }
Certificate ... Bristes

Feb (initials)

(*Travelling Expenses, if any, £* 8.8.-)

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

This vessel appears to be eligible to be classed as recommended 100 A.1 subject to the hand pumps in fore hold being made in accordance with the rules on the ... previously ...

Committee's Minute 21st February, 1879.

Character assigned 100 A 1

Lloyds M C 2 Dks 3 tr B. Iron Dk Deck

Double bottom ... ballast ... 30 feet

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