

IRON SHIP.

26th JUNE 82

No. 4592 Survey held at *Leith* Date, First Survey *12th March 81* Last Survey *20th June 1882*
 On the *Iron Screw Steamer "Clan Mackenzie"* 2 masts, 2 funnels, 2 funnels Master *Rule*

TONNAGE under Tonnage Deck *2686.85* ONE, OR TWO-DECKED; THREE DECKED VESSEL.
 Ditto of Third Spar, or Awaiting Deck. *156.12* SPAR, OR AWNING-DECKED VESSEL.
 Ditto of Poop, or Raised Or. Bk. *55.63* HALF BREADTH (moulded) *20.00*
 Ditto of Houses on Deck *55.03* DEPTH from upper part of Keel to top of Upper Deck Beams *30.08*
 Ditto of Forecastle *55.03* GIRTH of Half Midship Frame (as per Rule) *46.20*
 Gross Tonnage *2953.63* 1st NUMBER *46.28*
 Less Crew Space *8.20* 1st NUMBER, if a 3-DECKED VESSEL, deduct 7 feet *89.23*
 Less Engine Room *945.16* LENGTH *328.50*
 Register Tonnage as cut on Beam *1930.27* 2nd NUMBER *29328.48*
 PROPORTIONS—Breadths to Length *8.24*
 Depths to Length—Upper Deck to Keel *10.91*
 Main Deck ditto *14.87*

Built at *Leith*
 When built *1881 & 82* Launched *20th April 82*
 By whom built *Ramage & Ferguson*
 Owners *Clyde, Irvine, & Co.*
 Port belonging to *Glasgow*
 Destined Voyage *Glasgow*
 If Surveyed while Building, Afloat, or in Dry Dock.
Surveyed while building & afloat.

LENGTH	Feet.	Inches.	BREADTH—	Feet.	Inches.	DEPTH	Feet.	Inches.	Horse.	Nº. of Decks with flat laid	Nº. of Tiers of Beams
on deck as per Rule	328	6	Moulded	40	—	top of Floors to Upper Deck Beams	37	11	Power of Engines	400	—
						Do. do. Main Deck Beams	19	11			

Dimensions of Ship per Register, length, *329.6* breadth, *40.2* depth, *26.3* ft.

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
KEEL, depth and thickness <i>two bars each</i>	11 x 1 3/8	11 x 1 3/8	FLAT KEEL PLATES, breadth and thickness—	36	12
STEM, moulding and thickness	11 x 2 3/8	11 x 2 3/8	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	12	10 3/4
STERN-POST for Rudder do. do.	11 1/4 x 5 3/8	11 x 5 1/2	of doubling at Bilge, or increased thickness, and length applied	12	12
for Propeller	11 1/4 x 5 3/8	11 x 5 1/2	fin up part of Bilge to edge of Sheerstrake	12 3/4	12 3/4
Distance of Frames from moulding edge to moulding edge, all fore and aft	2 1/4	2 1/4	Main Sheerstrake, breadth and thickness of doubling at Sheerstrake, & length applied from Mn. to Up. or Spar Dk. Sheerstrake	42	13
			Up. or Spar Dk. Sheerstrake, breadth & thickness	42	13
FRAMES, Angle Iron, for 1/2 length amidships	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Butt Straps to outside plating, breadth & thickness	19 x 1 1/2	11 x 1 1/2
Do. for 1/4 at each end	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Lengths of Plating	2	do
REVERSED FRAMES, Angle Iron	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Shifts of Plating, and Stringers	2	do
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Gunwale Plate on ends of Awaiting, Spar, or Upper Deck Beams, breadth and thickness	48	9
thickness at the ends of vessel	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Angle Iron on ditto	4 x 4	9
depth at 1/2 the half-bdth. as per Rule	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Tie Plates fore and aft, outside Hatchways	4 x 4	9
height extended at the Bilges	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Diagonal Tie Plates on Beams No. of Pairs	4 x 4	9
BEAMS, Upper, Spar, or Awaiting Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Planksheer material and scantling	Iron	
Single or double Angle Iron on Upper edge	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Waterways do. do.	Iron	
Average space	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Flat of Upper Deck do. do.	Iron	
BEAMS, Main, or Middle Deck Single or double Ang. Iron, Plate or Tee Bulb Iron	5 1/2 x 3 1/2	5 1/2 x 3 1/2	How fastened to Beams	Iron	
Single or double Angle Iron on Upper edge	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	47	10
Average space	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Is the Stringer Plate attached to the outside plating?	Yes	
BEAMS, Lower Deck, Hold, or Orlop Single or double Ang. Iron, Plate or Tee Bulb Iron	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Angle Irons on ditto, No. 2	4 x 4	9
Single or double Angle Iron on Upper edge	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Tie Plates, outside Hatchways	4 x 4	9
Average space	5 1/2 x 3 1/2	5 1/2 x 3 1/2	Diagonal Tie Plates on Beams, No. of pairs	4 x 4	9
KEELSONS Centre line, single or double plate, box, or Intercoastal Plates	53	10	Waterways materials and scantlings	Iron	
Rider Plate	53	10	Flat of Middle Deck do. do.	Iron	
Bulb Plate to Intercoastal Keelson	6	4	How fastened to Beams	Iron	
Angle Irons	6	4	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	4 x 4	9
Double Angle Iron Side Keelson	6	4	Is the Stringer Plate attached to the outside plating?	Yes	
Side Intercoastal Plate of double bottom	3 1/2	3 1/2	Angle Irons on ditto, No.	3 1/2	3 1/2
do. Angle Irons	3 1/2	3 1/2	Stringer or Tie Plates, outside Hatchways	3 1/2	3 1/2
Attached to outside plating with angle iron	3 1/2	3 1/2	Flat of Lower Deck	3 1/2	3 1/2
BILGE Angle Irons	3 1/2	3 1/2	Ceiling betwixt Decks, thickness and material	2 1/2	2 1/2
do. Bulb Iron	3 1/2	3 1/2	in hold do. do.	8 1/2	8 1/2
do. Intercoastal plates riveted to plating for length	3 1/2	3 1/2	Main piece of Rudder, diameter at head	4 1/2	4 1/2
BILGE STRINGER Angle Irons	3 1/2	3 1/2	do. at heel	4 1/2	4 1/2
Stringer Intercoastal plates riveted to plating for whole length	3 1/2	3 1/2	Can the Rudder be unshipped afloat?	Yes	
SIDE STRINGER Angle Irons	3 1/2	3 1/2	Bulkheads No. 6 Thickness of	7	7
Transoms, material. Knight-heads. Hawse Timbers.	Iron		Height up to upper deck	Double frames	
Windlass <i>Harfield's Patent</i> Pall Bitt	Do		How secured to sides of ship	Double frames	

The FRAMES extend in one length from Centre Keelson to wing to plate, & above this to upper deck.
 The REVERSED ANGLE IRONS on floors and frames extend from middle line, to upper deck and to top of and to middle of stringer plates.
 KEELSONS. Are the various lengths of Plates and Angle Irons properly connected? *Yes*
 PLATING. Garboard, double riveted to Keel, with rivets *1 3/8* in. diameter, averaging *6* 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 1/2* ins. from centre to centre.
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 1/2* ins. from centre to centre.
 Butts of three Strakes at Bilge for half 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 *3 1/2* ins. from cr. to cr.
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 1/2* ins. from cr. to cr.
 Edges of Main Sheerstrake, double or single riveted.
 Butts of Main Sheerstrake, treble riveted for half length amidships.
 Butts of Upper or Spar Sheerstrake, treble riveted for half length amidships.
 Butts of Main Stringer Plate, treble riveted for half length amidships.
 Butts of Upper or Spar Stringer Plate, treble riveted for half length amidships.
 Breadth of laps of plating in double riveting *6" x 5"* Breadth of laps of plating in single riveting *—*
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *treble & double*
 Waterway, how secured to Beams *Riveted to Beams* (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? *Welded knees*
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Good*
 Manufacturer's name or trade mark, *Mossend & Co. Ltd.*
 The above is a correct description.
 Builder's Signature, *Ramage & Ferguson* Surveyor's Signature, *H. Davidson*
 Surveyor to Lloyd's Register of British and Foreign Ships

6470-155347

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed*
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? *No, except a few in butts.*

Masts, Bowsprit, Yards, &c., are *Iron & Pitched* 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

Length of Main Mast from deck to hounds *147 ft x 24 1/2 in* of *1/4 in* to the plates, 3 in the round, butts better riveted
Fore Mast *do do 147 ft x 25 1/2 do do do do*

One complete set. and	NUMBER for EQUIPMENT 34790		Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Supdnt.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Supdnt.	
	SAILS.	CABLES, &c.												
		Chain ... 37.2.3	300	2 ¹ / ₂	100.16.0.0	300-2	Low Walker R. Burrell	Bower Anchors						
	Fore Sails,	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)			72.0.0.0			(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	1	34.3.7	35.13.1.24	36.0.0	Low Walker R. Burrell	
	Fore Top Sails,	Iron Str'm Chain 37.2.8	90	1 ³ / ₄	38.0.0.0	90 1 ³ / ₄	do		6225	1	37.0.14	33.16.3.14	36.0.0	do
		Ditto do.			25.7.2.0				6408	1	32.3.24	30.12.3.7	34.1.0	do
	Fore Topmast Stay Sails,	Hmpn Strm Cbl						Stream	6409	1	11.3.7	13.13.3.0	11.2.0	do
		Hawser ...	90	10		90.10	kemp	Kedge	5809	1	6.0.0	8 ¹ / ₂	5.3.0	do
	Main Sails,	Towlines	240	1 ¹ / ₂	140.14.0.0	120.1 ¹ / ₂	Low Walker	Ditto	6410	1	2.3.0	5.5.0.0	2.3.0	do
	Main Top Sails,	Warp ...	98	8 ¹ / ₂		90.8 ¹ / ₂	kemp							
	quality													

Standing and Running Riggings of *Wire & Kemp* sufficient in size and *good* in quality. She has *two* Long Boats and *two* Cutters, a *big* & a *dingy*.
The Windlass is *Good* Capstan *Good* and Rudder *Good* Pumps *Good*

Engine Room Skylights. How constructed? *Of Teak, circular lights in lower* How secured in ordinary weather? *Bolted to Iron Casings.*

What arrangements for deadlights in bad weather? *Varpaulin*

Coal Bunker Openings. How constructed? *Plate Casings* How are lids secured? *Solid hatches held down by iron bars.* Height above deck? *18 in*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *6 scuppers 2 mesh ports & open gangway ports on each side.*

Cargo Hatchways. How formed? *Iron plate casings, riveted to beams & halfbeams.*

State size Main Hatch *28 ft x 11 ft* Fore hatch *16 ft x 11 ft* Quarter hatch *10 ft x 11 ft x 16 ft x 11 ft*

If of extraordinary size, state how framed and secured? *Ordinary size*

What arrangement for shifting beams? *In 28 ft hatch 2 shifting beams of plate & angle iron with 3 iron fore & afters, in 16 ft hatch 1 shifting beam of plate & angle, with 3 iron fore & afters.*

Hatches, If strong and efficient? *Yes, solid 2 1/2 in thick*

Order for Special Survey No. <i>292</i>	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	<i>Built under special survey & surveyed:</i>
Date <i>18th March 1881</i>		2nd. On the plating during the process of riveting	<i>1881, March 12, May 25, June 14, 16, 27, July 11, 15, 22, 27.</i>
Order for Ordinary Survey No. <i>35</i>		3rd. When the beams were in and fastened, and before the decks were laid...	<i>Aug. 4, 8, 12, 16, 22, 26, Sept. 8, 14, 16, 21, 23, Oct. 5, 7, 10, 18, 22, 25, 31.</i>
Date <i>1881</i>		4th. When the ship was complete, and before the plating was finally coated or cemented...	<i>Nov. 2, 4, 9, 11, 14, 22, 25, 30, Dec. 28, 1882: Jan. 11, 19, 23, 27, 30.</i>
No. <i>35</i> in builder's yard		5th. After the ship was launched and equipped	<i>Febr. 8, 17, 24, 27, March 4, 7, 13, 21, 31, April 3, 11, 12, 17, 20, May 6, 9, 15, 26, 27, 29.</i>

General Remarks (State quality of workmanship, &c.) *June, 5, 7, 12, 15, 20*

Workmanship & Material good

This vessel is built in accordance with the accompanying tracings, 5 in number, approved by the Committee & in conformity with the Rules; and in addition a wood deck of 3 1/2 in g.t. is laid on iron upper deck.

The Tanks of double bottom have been tested by a head of water to the height of the load waterline and found satisfactory.

The Engineer Surveyors Report is sent herewith.

State if one, two, or three decked vessel, or if spar, or masting-decked; and the lengths of poop, fore-castle, or raised quarter-deck, and the length of double, or part double bottom. *6 ft from sternpost 38 feet*

How are the surfaces preserved from oxidation? Inside *Cement & 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, *H. T. Jensen*
Special ... £ 98 : 16 : 6 *24th June 1882*
Certificate ... *gratis*

Committee's Minute *Tuesday, 27th June, 1882*

Character assigned *100 A1*

TRM 2 Iron Deck & Web frames

