

IRON SHIPS.

No. 5426 Survey held at Port Glasgow Date 13th July 1868
 the Screw Steam Schooner "Merlin" Master J. Orkney
 Tonnage under tonnage deck 151.09 Built at Port Glasgow When built 1867 Launched Jan'y 1867
 of poop or spar deck 19.80 By whom built Blackwood & Gordon Owners J. Orkney & others
 of House on deck 55.57 Register tonnage 173.6 Port belonging to Port Glasgow Destined Voyage Clyde to Melbourne
 of engine room 173.6 Tonnage marked on beam 118.19 Port belonging to Port Glasgow Destined Voyage Clyde to Melbourne
 covered while Building, Afloat, or in Dry Dock Occasionally while building

aloft	Feet.	Inches.	Extreme Breadth	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Power of Engines	Horse.	N ^o . of Decks
189	70		19	10		9	70		50		one

Dimensions of Ship per Register, length 144 breadth 19 10 depth 9 70											
	Inches in Ship.			Inches required per Rule.				Inches.			
	In Ship.	In Ship.	16ths. In Ship.	Inches. required per Rule.	Inches. required per Rule.	16ths. required per Rule.		Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	16ths. required per Rule.
Keel, bar iron, depth and thickness.....	6 1/2	1 1/2		6	1 1/2		Plates in Garboard Strakes, breadth and thickness	30	76	24	76
" if plate iron, breadth and thickness	6 1/2	1 1/2		6	1 1/2		Ditto from Garboard to upper part of Bilges..		46		66
stem, bar iron, moulding and thickness	6	3		6	3		" from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold		56		56
" if plate iron, breadth and thickness	6	3		6	3		" from 3/4ths depth of Hold to lower edge of Sheerstrake		56		56
Stern-post, bar iron, moulding and thickness	6	3		6	3		" Sheerstrake, breadth and thickness	86	46	24	46
" " bar iron, breadth and thickness	6	3		6	3		Butt Straps to outside plating, breadth and thickness	74	46	24	46
Distance of Frames from moulding edge to moulding edge, all fore and aft	21			21			Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness	34	56	19 70	56
Frames, Size of Angle Iron, single or double	2 1/2	2 1/2	56	2 1/2	2 1/2	56	Angle Iron on ditto	3x3x	46	3x3x	46
" " Reversed Iron, to every frame and on every alternate frame to be used	2 1/2	2 1/2	56	2 1/2	2 1/2	56	Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways ..	8	56	7 10	56
Floors, depth and thickness of Floor Plate at mid line	12		56	11 1/2		56	Diagonal Tie Plates on ditto.....	8	56	7 10	56
" Ditto ditto at Bilge Keelson	8		56			56	Planksheer, materials and scantlings				
" Size of Reversed Angle Iron, and No. single at top of Floor Plate	2 1/2	2 1/2	56	2 1/2	2 1/2	56	Waterway ditto ditto <u>Red. Pine.</u>	7x3			
Beams, Deck (N ^o . single Angle Iron, Plate, Tee, or Bulb Iron	5	3	76	4 3/4		56	Flat of Upper Deck, thickness and material.	2 1/2		2 1/2	
" " double or single Angle Iron, on edge....				1 3/4	1 3/4	76	" " how fastened to Beams <u>By screw bolts & nuts from above</u>				
" " average space between	3 feet 6 inches			3 feet 6 inches			Ceiling betwixt Decks and in Hold, thickness and material..... <u>Red. Pine, battens</u>	6x2			
" Hold, or Lower Deck (N ^o . double Angle, Tee, Plate, or Bulb Iron)							" in flat <u>American Keel</u>	2			
" " double or single Angle Iron on edge....							Clamps or Spiketting ditto.....				
" " average space between							Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness				
" Paddle, sided and moulded, thickness of Plate size of Angle Iron							Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams				
" Engine " " " "							Stringers in Hold <u>Double Angle Iron</u>	3x3x	46	3x3x	46
Keelson, single or double plate, box, or intercostal	12		76				Flat of Lower Deck, thickness and material..	12		7 6	about 55 feet unmed ships see remarks on other side.
" Size of Plates <u>Single plate.</u>	3	3	56	3	3	56	Main piece of Rudder, diameter at head	3		3	
" Size of Angle Irons	3	3	56	3	3	56	" " " at heel	2 1/2		2	
" Side, single or d'ble, plate, box, or intercostal							(Can the Rudder be unshipped afloat <u>No</u>)				
" Bilge (No. <u>Two</u> <u>one</u> at each Bilge, single, or double, plate, or box <u>Angle Iron</u>)	3	3	56	3	3	56	Bulkheads, N ^o <u>Four</u> Thickness of		46		46
							" Height up <u>to upper deck</u>				

Transoms, material Iron or, if none, in what manner compensated for.
 Knight-heads, and Hawse Timbers Iron
 The Frames extend in one length from Keel to Gunnwale rivetted through plates with (5/8 in.) rivets, about (5 inches) apart.
 The reverse angle irons on the floors extend in one length across the middle line from upper part of bilge to Gunnwale alternately
 " " and on the frames " " " from to to
 Keelson, how are the various lengths of plates or angle irons connected? By Angle Iron butt straps
 Plates, Garboard, double or single rivetted to keel, double or single at upper edge, with rivets (7/8 & 5/8 ins.) diameter, averaging (3 1/2 in.) apart.
 " Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (5/8 in.) diameter, averaging (2 1/2 ins.) apart.
 " Butts from Keel to turn of bilge, worked carvel with butt straps (7/8 & 5/8) thick, double or single rivetted; with rivets (5/8 in.) diameter, averaging (2 1/2 ins.) apart. Do the butt straps lap over and rivet through the lands of the strake below? No
 " Edges from bilge to sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single rivetted; with rivets (5/8 in.) diameter, averaging (2 1/2 in.) apart. Do the butt straps lap over and rivet through the lands of the strake below? No
 " Edges of Sheerstrake, double or single rivetted? At upper edge single At lower edge Double
 " Butts from bilge to planksheers, worked carvel with butt straps (5/8 & 5/8) thick, double or single rivetted; with rivets (5/8 in.) diameter, averaging (2 1/2 ins.) apart. Breadth of laps in double rivetting (4 inches) Breadth of laps in single rivetting (3 inches)
 Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?
 Planksheer, how secured to the plating of the sides { Explain by sketch }
 Waterway " " planksheer and to the Beams { if necessary. }
 Deck Beams, how secured to the side? By plate knees 12 1/2 x 76 inch
 Hold or Lower Deck ditto
 Paddle " " No. of breasthooks three crutches three
 What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.? Messend Iron
 Manufacturer's name or trade mark Messend Iron Co

We certify that the above is a correct description of the several particulars therein given.
 Builder's Signature pro Blackwood & Gordon Surveyor's Signature A W Gordon
 Lloyd's Register
 Foundation
 IRON 442-0325

6359 Lm

Workmanship. Are the lands or laps of the clenchwork in all cases in breadth at least five and a half times the diameter of the rivets in double rivetted edges and butts, and at least three and a quarter times the diameter of the rivets where single rivetting is admitted? Yes
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
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? Solid lengths
Do the holes for rivetting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the outer plate? Yes
Are there any rivets which either break into or have been put through the seams or butts of the plating? A few

Her Masts, Bowsprit, Yards, &c., are in Good condition, and sufficient in size and length. (If they are of Iron or Steel give the 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 rivetting, quality of Materials, and if stamped with Maker's name.)

No.	She has SAILS.	tested at "Lloyd's" Northton Proving House. M. K. Reade				tested at Glasgow Public Proving House. Wm Taylor			
		CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	ANCHORS, &c.	No.	Weight Ex. Stock.
	Fore Sails,	2815 S.P.S.B. N. 23/3/1887	90	7	13.15.0.0	13	34.66 S.P.S.B. 70.5/3/1887	1	5.0.25
	Fore Top Sails,	2829 S.P.S.B. N. 26/3/1887	90	7	13.15.0.0	13	Bowers	1	5.1.14
	Fore Topmast Stay Sails	Hempen Stream Cable	90	7		5 1/2	Stream	1	2.0.14
	Main Sails,	Hawser	90	5		3			
	Main Top Sails,	Towlines	90	3			Kedges	1	1.0.7
	and	Warp							
		All of <u>Good</u> quality.							
Her Standing and Running Rigging <u>Hemp</u> sufficient in size and <u>Good</u> in quality.									
She has <u>One Life</u> Long Boat and <u>One other</u>									
The present state of the Windlass is <u>Brown & Hafield</u> Capstan <u>patent Good</u> and Rudder <u>Good with patent</u> Pumps <u>Good had Good</u>									

Order for Special Survey	No.	DATES of	1st.	2nd.	3rd.	4th.	5th.
		Surveys held	On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the progress of rivetting	When the beams were in and fastened, and before the decks were laid	When the ship was complete, and before the plating was finally coated	After the ship was launched
		while building					
Order for Ordinary Survey	No.	as per					
		Section 18.					

State if she has a Spar Deck _____ Poop _____ or Forecastle _____

General Remarks, This vessel was built not in strict conformity with the Rules, or for classification; but was seen by me at various times while building. And on comparing her with the Rules, Table B, I find as to scantlings she is very nearly equal to the A grade. She is 14.85 depths in length. Her sheerstrakes, and deck stringer plates are not of the thickness required for vessels of such dimensions, but they are broader than required by Rule: Please see sketch herewith appended. The Hold stringer extends from within 8 feet of the break of raised quarter deck forward to the fore bulkhead.

I beg to submit her to the consideration of the Committee for the A grade

In what manner are the surfaces preserved from oxidation? Inside Portland Cement between the floors & upper part of belges. Above Red lead
Ditto ditto Outside Three coats of Red lead. Black paint on top sides

I am of opinion this Vessel should be Classed _____

The amount of the Fee£ 2 : " : " is received by me,

Special£ 7 : 17 : 6

X Certificate (if required)£ " : 2 : 6

Committee's Minute 21st July 18 68

Character assigned A

This vessel appears eligible for the Class A
Hoyds Registered
20 July 1868