

# IRON SHIPS.

No. 2422 Survey held at Glasgow Date 19<sup>th</sup> December 1863  
 on the Screw Steamer Leeds Master E. J. Hough  
 Tonnage under tonnage deck 324.40 Built at Glasgow When built 1863 Launched 23<sup>rd</sup> Nov 1863  
 Ditto of poop 49.44 or spar deck By whom built W. & J. Inglis Owners Manchester, Sheffield & Lancashire Railway Co  
 Ditto of engine room 101.66 Port belonging to Glasgow Destined Voyage Coastwise  
 Total Register tonnage 243.44 Surveyed while Building, Afloat, or in Dry Dock Whilst building and Afloat  
 Gross tonnage 345.40

Length aloft		Extreme Breadth		Depth from top of Upper Deck Beam to top of Floor		Power of Engines		Horse.		N <sup>o</sup> . of Decks		
12. 0		24 3		12. 2 1/2		100		1		1		
(Dimensions of Ship per Register, length <u>120</u> breadth <u>24.3</u> depth <u>12.0</u> )												
Keel, if bar iron, depth and thickness	Inches in Ship.		Inches required per Rule.		Plates in Garboard Strakes, breadth and thickness		Inches. In Ship.		16ths. In Ship.		Inches. required per Rule.	
" if plate iron, breadth and thickness	6 1/2 x 2 1/4		6 1/2. 2 1/4		Ditto from Garboard to upper part of Bilges..		31		9		24	
Stem, if bar iron, moulding and thickness	6 1/2 x 2 1/4		6 1/2. 2 1/4		" from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold		3/16		3/16		3/16	
" if plate iron, breadth and thickness	6 1/2 x 4 1/2		6 1/2. 4 1/2		" from 3/4ths depth of Hold to lower edge of Sheerstrake		3/16		3/16		3/16	
Stern-post, if bar iron, moulding and thickness	21		21		" Sheerstrake, breadth and thickness		39 1/2		15		24	
" if plate iron, breadth and thickness	21		21		Butt Straps to outside plating, breadth and thickness		10 1/2. 10. 2. 1/16					
Distance of Frames from moulding edge to moulding edge, all fore and aft	Inches. In Ship.		Inches. In Ship.		Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness		3 1/2		2		25	
Frames, Size of Angle Iron, single or double	3 1/2 x 2 1/4		3 1/2 x 2 1/4		Angle Iron on ditto		4 1/2		5 1/2		3	
" Reversed Iron, to every frame and on every other frame	2 1/2 x 2 1/2		2 1/2 x 2 1/2		Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways		9		3/8		9	
Floors, depth and thickness of Floor Plate at mid line	15 1/2		15		Diagonal Tie Plates on ditto		9		3/8		9	
" Ditto ditto at Bilge Keelson	4 1/4		4 1/4		Planksheer, materials and scantlings		Iron Bulwarks					
" Size of Reversed Angle Iron, and No. at top of Floor Plate	2 1/2 x 2 1/2		2 1/2 x 2 1/2		Waterway ditto		5 1/2 x 3/8		5 1/2		3	
Beams, Deck (N <sup>o</sup> . ) double Angle Iron, Plate, Tee, or Bulb Iron	6		6		Flat of Upper Deck, thickness and material		3 1/2. Pine		3			
" double or single Angle Iron, on Upper edge	2 1/2 x 2 1/2		2 1/2 x 2 1/2		" how fastened to Beams		Nuts & Bolts					
" average space between	3. 6		3. 6		Ceiling betwixt Decks and in Hold, thickness and material		2 1/2. 6 Red Pine		6		3	
" Hold, or Lower Deck (N <sup>o</sup> . ) double Angle, Tee, Plate, or Bulb Iron	6		6		Clamps or Spirketting ditto		Battened					
" double or single Angle Iron on Upper edge	2 1/2 x 2 1/2		2 1/2 x 2 1/2		Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness		9		5/8		18 1/4	
" average space between	Every 6 <sup>th</sup> frame		Every 6 <sup>th</sup> frame		Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams		4. 2. 1/2		3		3 1/2	
" Paddle, sided and moulded, thickness of Plate size of Angle Iron	"		"		Stringers in Hold		6 x 3/8		6		3	
" Engine " " " "	"		"		Flat of Lower Deck, thickness and material		4. 3. 3/8		3		3 1/2	
Keelson, single or double plate, box, or intercostal	10 1/2		10 1/2		Main piece of Rudder, diameter at head		4 1/2		3 1/4		5	
" Size of Plates	4		4		" " " at heel		3 1/2		2 1/4			
" Size of Angle Irons	3		3		(Can the Rudder be unshipped afloat)		Yes					
" Side, single or double, plate, box, or intercostal	4 x 3/8		4 x 3/8		Bulkheads, N <sup>o</sup> . 4 Thickness of		3					
" Bilge (N <sup>o</sup> . ) at each Bilge, single, or double, plate, or box	4		4		" Height up		Upper Deck					
Transoms, material	Iron Plate		Iron Plate		" how secured to the sides of the ship		Rivets between two frames					
Knight-heads, and Hawse Timbers	Iron Plate and frames		Iron Plate and frames		" size of vertical angle irons		3. 2 1/2. 7/8 and their distance apart		2. 8			
The Frames extend in one length from	Middle Line to Gunwale		Middle Line to Gunwale		rivetted through plates with ( 3/4 in. ) rivets, about ( 5 <sup>th</sup> ) apart.							
The reverse angle irons on the floors extend in one length across the middle line from	Upper part of Bilge to Ditto		Upper part of Bilge to Ditto									
" " " on the frames " " " from	Middle Line to Gunwale		Middle Line to Gunwale									
Keelson, how are the various lengths of plates or angle irons connected?	By Long Pieces		By Long Pieces									
Plates, Garboard, double	rivetted to keel, double		rivetted to keel, double		at upper edge, with rivets ( 1 1/2 in. ) diameter, averaging ( 2 1/2 in. ) apart.							
" Edges from Garboards to upper part of bilge, worked clencher, double	or single rivetted; with rivets ( 3/4 in. ) diameter, averaging ( 2 1/2 ins. ) apart.		or single rivetted; with rivets ( 3/4 in. ) diameter, averaging ( 2 1/2 ins. ) apart.									
" Butts from Keel to turn of bilge, worked carvel with butt straps ( 1/8 ) thick, double	or single rivetted; with rivets ( 3/4 in. ) diameter, averaging ( 2 1/2 ins. ) apart.		or single rivetted; with rivets ( 3/4 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 ( 1/2 in. ) diameter, averaging ( 2 1/4 in. ) apart.		or single rivetted; with rivets ( 1/2 in. ) diameter, averaging ( 2 1/4 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		or single rivetted? At upper edge		Single		At lower edge		Double			
" Butts from bilge to planksheers, worked carvel with butt straps ( 1/8 & 1/16 ) thick, double	or single rivetted; with rivets ( 5/8 in. ) diameter, averaging ( 2 1/2 ins. ) apart.		or single rivetted; with rivets ( 5/8 in. ) diameter, averaging ( 2 1/2 ins. ) apart.		Breadth of laps in single rivetting ( 5/8 in. )		Breadth of laps in double rivetting ( 5/8 in. )					
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted?	Double		Double									
Planksheer, how secured to the plating of the sides	Explain by sketch		Explain by sketch		Iron Bulwarks							
Waterway	Planksheer and to the Beams		Planksheer and to the Beams		if necessary.							
Deck Beams, how secured to the side?	Welded		Welded		Ditto							
Hold or Lower Deck ditto	Ditto		Ditto									
Paddle " " "	No. of breasthooks		No. of breasthooks		4		crutches		4			
What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.?	Parkhead Boiler		Parkhead Boiler									
Manufacturer's name or trade mark												

We certify that the above is a correct description of the several particulars therein given.

Builder's Signature

Surveyor's Signature

L. W. Little's Register Foundation

IRON 439-0095



Workmanship. Are the lands or laps of the clenchwork in all cases in breadth at least three 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? are they in short lengths of various thicknesses? Yes  
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 in Corners of Butts

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.

Tested by M. K. Reed  
2<sup>nd</sup> 18<sup>th</sup> November 1855

She has SAILS.			CABLES, &c.			ANCHORS, and their weights.		
No.			Tested by M. K. Reed Nov 18 <sup>th</sup> 1855	Fathoms.	Inches.	Tested to Tons.	No.	Weight. Ex. Stock. Tested to Tons.
✓	Fore Sails,		Chain .....	210	1 1/2	22 1/2	3	10.1.6 12.5.0
✓	Fore Top Sails,		Hempen Stream Cable .....	90	4			2.2.8 11.10.0
✓	Fore Topmast Stay Sails,		Hawser .....	90	5			2.1.20 11.10.0
✓	Main Sails,		Forlines <u>Stream Chain</u> .....	90	4 1/2		1	2.1.20 11.10.0
✓	Main Top Sails,		Warp .....				2	2.1.11 4.10.0
and <u>Other requisite Sails</u>			All of <u>Good</u> quality.					1.0.5 2.15.0
Her Standing and Running Rigging			Tested by M. K. Reed Nov 18 <sup>th</sup> 1855			in size and <u>Good</u> in quality.		
She has			1 <sup>st</sup> 20.0	Long Boat and	2 <sup>nd</sup> 22.0	Life Boat	1 <sup>st</sup> 20.0	Gig.
The present state of the Windlass is			<u>new of iron</u> Capstan <u>new of iron</u> and Rudder <u>new</u> Pumps <u>new and efficient</u>					

Order for Special Survey DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Built under  
No. 408 2nd. On the plating during the progress of rivetting Special Survey from 2<sup>nd</sup> Sept  
Date 2<sup>nd</sup> Sept 1855 while building 3rd. When the beams were in and fastened, and before the decks were laid Full 19 Decr 1855  
Order for Ordinary Survey as per 4th. When the ship was complete, and before the plating was finally coated  
No. \_\_\_\_\_ Section 18. 5th. After the ship was launched  
Date \_\_\_\_\_

State if she has a Spar Deck No Poop Yes or Forecastle Yes

General Remarks,

This vessel is double rivetted throughout. The butts of sheerstrake and gunwale plate are treble rivetted. The sheerstrake is doubled its whole length with plates 70 thick for three fourths the length of the vessel. Has two additional stringers in Hold one intercostal fitted with a Bulk Head 9x10 with double angle Irons 4x3x1/2. Has double key pieces fitted to the tween deck stringer, and is in all other respects as per approved midship section. (Plan with sister ship Bradford, Iron Reg. 4526)

In what manner are the surfaces preserved from oxidation? Inside Plat of Bottom with Portland Cement  
Ditto ditto Outside Red Lead and Oil Paint.

I am of opinion this Vessel should be Classed A  
The amount of the Fee .....£4 \* \* is received by me,  
Special .....£18 15. -  
Certificate (if required) .....£ Gratis

Committee's Minute 9<sup>th</sup> January 18 66

Character assigned A

J. W. Kettle

I am of opinion this Ship  
Steamer is Safe for  
Classification as recommended  
above.  
Lloyd's Register  
Foundation