

## IRON SHIPS.

Reg 12/9/70

Survey held at Glasgow Date 14th Jan 1870 to 13th Aug 1870  
 on the Iron Ship "Hudson" Master Wm Sandray James Grange  
 Tonnage under tonnage deck 699.06 Built at Glasgow When built 1868 Launched 25th Feb 1868  
 Ditto of poop 335.57 By whom built J. G. Laurie Owners E. G. Laurie & Sons Blackwood  
 Ditto of engine room 7.69  
 Total Register tonnage 55.90  
 Gross Tonnage 986.36 Port belonging to London Destined Voyage China  
 Average Register 652.84  
 Surveyed while Building, Afloat, or in Dry Dock whilst building and afloat

Feet.	Inches.	Feet.	Inches.	Depth from top of Upper Deck Beam to top of Floor	Feet.	Inches.	Horse.	Nº. of Decks
229	6	28	2	16.85	14	0	180	Two

Dimensions of Ship per Register, length 236 breadth 28.2 depth 23.5

	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.
Keel, if bar iron, depth and thickness	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3
" if plate iron, breadth and thickness	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3
Stem, if bar iron, moulding and thickness	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3
" if plate iron, breadth and thickness	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3
Stern-post, if bar iron, moulding and thickness	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3
" if plate iron, breadth and thickness	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3	8 x 2 1/2	8 x 3
Distance of Frames from moulding edge to moulding edge, all fore and aft	21	21	21	21	21	21	21	21
Frames, Size of Angle Iron, single or double	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
" Reversed Iron, 1/4 to every frame	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
" Bilge 3/4 to every other frame	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3
Floors, depth and thickness of Floor Plate at mid line	10	10	10	10	10	10	10	10
" Ditto ditto at Bilge Keelson	9	9	9	9	9	9	9	9
" Size of Reversed Angle Iron, and No. 1 & 2 at top of Floor Plate	3	3	3	3	3	3	3	3
Beams, Deck (No. 1) double Angle Iron, Plate, or Bulb Iron	4	4	4	4	4	4	4	4
" " double or single Angle Iron, on upper edge	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2
" " average space between centres	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins
" Hold, or Lower Deck (No. 1) double Angle, Tee, Plate, or Bulb Iron	4	4	4	4	4	4	4	4
" " double or single Angle Iron, on upper edge	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2
" " average space between centres	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins	3 ft 6 ins
" Paddle, sided and moulded, thickness of Plate size of Angle Iron	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
" Engine	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Keelson, single or double plate, box, or intercostal	Intercoastal	Intercoastal	Intercoastal	Intercoastal	Intercoastal	Intercoastal	Intercoastal	Intercoastal
" Size of Plates	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2	22 1/2
" Size of Angle Irons	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2
" Side, single or double, plate, box, or intercoastal	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2
" Bilge (No. 1) at each Bilge, single or double, plate, or box	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2
Transoms, material <u>Plating</u> , if none, in what manner compensated for.								
Knight-heads, and Hawse Timbers <u>Iron Frames</u>								
The Frames extend in one length from <u>middle line</u> to <u>Gunnwale</u> rivetted through plates with (3/4 in.) rivets, about (6 in.) apart								
The reverse angle irons on the floors extend in one length across the middle line <u>from</u> <u>to the upper part of Bilges</u>								
" " " on the frames " " " <u>from</u> <u>and</u> <u>to the Gunnwale on alternate Frames</u>								
Keelson, how are the various lengths of plates or angle irons connected? <u>by lining pieces</u>								
Plates, Garboard, double or single rivetted to keel, double or single at upper edge, with rivets (1 3/4 ins.) diameter, averaging (12 in.) apart.								
" Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (3 ins.) apart.								
" Butts from Keel to turn of bilge, worked carvel with butt straps (1/2 x 1/2) thick, double 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? <u>No</u>								
" Edges from bilge to sheerstrake, worked carvel with a lining piece ( ) thick, or clencher, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 1/2 in.) apart.								
Do the butt straps lap over and rivet through the lands of the strake below? <u>No</u>								
" Edges of Sheerstrake, double or single rivetted? At upper edge <u>Single to Bulwarks</u> at lower edge <u>Double</u>								
" Butts from bilge to planksheers, worked carvel with butt straps (1/2 x 1/2) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 1/2 ins.) apart. Breadth of laps in double rivetting (5 1/2 in.) Breadth of laps in single rivetting (3 1/2 in.)								
Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? <u>Double</u>								
Planksheer, how secured to the plating of the sides <u>Explain by sketch</u> <u>has Bulwarks</u>								
Waterway " " planksheer and to the Beams <u>if necessary.</u> <u>has Bulwarks</u>								
Deck Beams, how secured to the side? <u>Welded knees rivetted to Beams</u>								
Hold or Lower Deck ditto <u>Double</u>								
Paddle " " <u>Four</u> crutches <u>Four</u>								
What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c.? <u>Blackburne</u>								
Manufacturer's name or trade mark <u>Mosses</u>								
We certify that the above is a correct description of the several particulars therein given.								
Builder's Signature <u>J. G. Laurie</u> Surveyor's Signature <u>A. B. Dainoff</u>								



8256 Len

**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?* *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 casings 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.)

Schooner rigged -

No.	She has SAILS.	CABLES, &c., tested at <i>Netherton by Mr. Reade</i>					ANCHORS, tested at <i>Netherton by Mr. Reade</i>					
		No. on Chain seen by me.	No. and date on Certificate	Fathoms.	Inches.	Tested to Tons.	No.	No. on Anchor seen by me.	No. and date on Certificate	Weight. Ex. stock.	Tested to Tons.	
1	Fore Sails,	Chain	6707 E	6707 E	270	1 1/2	40-10	1	4847	4847	21.1.0	21.16.1
2	Fore Top Sails,	Hemp	6700 R	6700 R	170	1 3/4	40-10	1	4848	4848	21.0.18	21.15.0
3	Fore Topmast Stay Sails,	Stream Cable	6700 R	6700 R	170	1 3/4	40-10	1	4849	4849	18.1.2	19.4
4	Main Sails,	Hawser			90	1 3/4	40-10	1			9.0.4	
5	Main Top Sails,	Towlines			8 1/2	6 1/2	40-10	1			2.1.14	
6	and	Warp			6 1/2	6 1/2	40-10	1			4.2.7	
		All of <i>good</i> quality.										

Her Standing and Running Rigging *wire & hemp* sufficient in size and *good* in quality.

She has *five* Long Boat and *Boats*

The present state of the Windlass is *Harfield* Capstan *new* and Rudder *efficient* Pumps *efficient*

Order for Special Survey No. *376* 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

2nd. On the plating during the progress of rivetting *Built under Special Survey*

3rd. When the beams were in and fastened, and before the decks were laid *from the 1st Jan 1870*

4th. When the ship was complete, and before the plating was finally coated

5th. After the ship was launched *16 Aug 13 1870*

State if she has a Spar Deck *No* Poop *Yes* or Forecastle *Yes joined by an awning*

**General Remarks,** As compensation for excess of length to depth as per Clause 10 of the Rules for building Iron Ships, the Sheerstrake is doubled its whole depth with a 10 plate and well rivetted together between Frames. The Gunwale Plate increased to forty one inches in width, a Bulb Bar added to Bilge Keelson 9 x 90 for a third the length in midships, from thence 7 x 40.

Bulb Bar to middle line Intercostal Keelson and side Stringer 9 x 90. The Reverse Frames in way of the Engine Room doubled to the upper part of Bilges. In way of Coal Bunkers in line of Hold Beam Stringer a Bulb Bar 9 x 90 fitted and double Angle Bars 4 1/2 x 3 1/2 x rivetted to Double Reverse Frames

Now done. An awning deck fitted from forecabin to poop. the scantlings of which are in conformity with the approved midship section attached - viz. Stringer plate and Sheerstrake each 7/16 thick, beams of angle iron 4 1/2 x 3 x 7/16 and 5 x 4 1/2 x 7/16 - and also to the recommendations contained in Circular of 26<sup>th</sup> March 1868 relating to awning decks -

The Name and Owners have been changed since this report was written

In what manner are the surfaces preserved from oxidation? Inside *Flat of Bottom with Portland Cement, rivets with B.L.*

Ditto ditto Outside *Oil paint*

I am of opinion this Vessel should be Classed *B. 1.*

The amount of the Fee ..... £ 5 : : : is received by me,

Special ..... £ 49 : 6 : :

Certificate (if required) ..... £ 4 : 10 : :

Committee's Minute *13<sup>th</sup> Sept 1870*

Character assigned *B. 1*

*16 Sept 70*

*Raised to*

*awning deck*

*B. Darling*

*This Vessel appears eligible to be classed B. 1 and marked as an awning deck*

*London's Registered Foundation*