

# Steel IRON SHIP.

(Received at London) 29 SEPT 1887

No. 20411 Survey held at Newcastle Date, First Survey 4th Feb'y Last Survey 21st September 1887.

On the Steel Bg. Rigged Screw Steamer "Hifeshire"

TONNAGE under Tonnage Deck } 3028.25 ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AWNING-DECKED VESSEL.

Ditto of Third, Spar, or Awning Deck. } 604.03 Half Breadth (moulded) . . . . . 23.66

Ditto of Poop, or Raised Or. Dk. } 5.92 Depth from upper part of Keel to top of Upper Deck Beams 27.83

Ditto of Houses } 9.11 Girth of Half Midship Frame (as per Rule) . . . . . 45.39

Excise on Deck } 2.76 1st Number . . . . . 96.88

Ditto of Forecastle } 64.67 1st Number, if a 3-Decked Vessel . . deduct 7 feet 7

Gross Tonnage 3719.74 Length . . . . . 343.16

Less Crew Space 104.17 2nd Number . . . . . 30843

Less Engine Room 1190.32 Proportions— Breadths to Length . . . . . 7.25

Register Tonnage as cut on Beam } 2422.25 Depths to Length—Upper Deck to Keel . . . . . 12.3

Main Deck ditto . . . . . 17.2

Master Wm Millar 1887-1884

Built at Newcastle

When built 1887 Launched 28th July 1887

By whom built C.S. Swan & Hunter

Owners Turnbull, Martin & Co

Residence 29 Waterloo St. Glasgow

Port belonging to Glasgow

Destined Voyage Australia via London

If Surveyed while Building, Afloat, or in Dry Dock.

While building

LENGTH on deck as per Rule . . . 343 Feet. 2 Inches. BREADTH Moulded . . . 47 Feet. 4 Inches. DEPTH top of Floors to Upper Deck Beams . . . 24 Feet. 4 Inches. Do. do. Main Deck Beams . . . 16 Feet. 5 Inches. Power of Engines . . . 400 Horse. N° of Decks with flat laid Two N° of Tiers of Beams Two

Dimensions of Ship per Register, length, 345 breadth, 47.6 depth, 24.1 Moulded depth 26'-10"

KEEL, depth and thickness Two side plates Inches in Ship. 11 x 1 1/2 Inches per Rule. 11 x 1 1/2

STEM, moulding and thickness . . . . . 53 x 10/20 PLATES in Garboard Strakes, br'dth & thickness 38 12/20 36 11/20

STERN-POST for Rudder do. do. . . . . 11 x 2 3/4 " From Garboard to upper part of Bilges . . . 11 x 12 20 Alternately 11 x 12 20

" " for Propeller . . . . . 11 x 6 1/2 " Of d'bling at Bilge, or increased thickness, and length applied 11 x 12 20 Alternately 11 x 12 20

Distance of Frames from moulding edge to moulding edge, all fore and aft . . . . . 24 " From up prt of Bilge to lr. edge of Sh'rstrake . . . 4 1/2 12/20 40 13/20

FRAMES, Angle Iron, for 2/3 length amidships . . . 5 1/2 3 1/2 8/20 5 1/2 3 1/2 8/20 " Main Sheerstrake, breadth and thickness . . . 4 1/2 12/20 40 13/20

Do. for 1/3 at each end . . . . . 5 1/2 3 1/2 8/20 5 1/2 3 1/2 8/20 " Of d'bling at Sh'stk. & lng. applied 1/2 length 24 11/20 41/20

REVERSED FRAMES, Angle Iron . . . . . 3 1/2 3 1/2 8/20 3 1/2 3 1/2 8/20 " From M'n. to Up. or Spar Dk. Sh'rstrake . . . 16 1/2 15 15 15 15 15 15

FLOORS, depth and thickness of Floor Plate at mid line for half length amidships . . . 42 x 7/20 42 x 7/20 " Up or Spar Dk Sh'rstrake, br'dth & thickn'ss . . . 16 1/2 15 15 15 15 15 15

" thickness at the ends of vessel . . . . . 7/20 Butt Straps to outside plating, breadth & thickness 16 1/2 15 15 15 15 15 15

" depth at 2/3 the half-bdth. as per Rule . . . Cellular system Lengths of Plating 7 frame spaces

" height extended at the Bilges . . . . . A fair curve Shifts of Plating, and Stringers 2 frame spaces

BEAMS, Upper, Spar, or Awning Deck } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } 10 x 10/20 10 x 10/20 Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness . . . 49 10/20 49 10/20

Single or double Angle Iron on Upper edge . . . 3 1/2 3 1/2 8/20 3 1/2 3 1/2 8/20 Angle Iron on ditto Steel . . . . . 4 x 4 9/20 4 x 4 9/20

Average space . . . . . 48 Tie Plates fore and aft, outside Hatchways

BEAMS, Main, or Middle Deck } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } 11 1/2 x 11/20 11 1/2 x 11/20 Diagonal Tie Plates on Beams No. of Pairs

Single or double Angle Iron on Upper Edge . . . 3 1/2 3 1/2 8/20 3 1/2 3 1/2 8/20 Flat of Up., Spar, or Awning Dk. \* Steel 3 1/2 x 7/20 3 1/2 x 7/20

Average space . . . . . 48 How fastened to Beams Steel Riveted & Wood screw bolts & nuts

BEAMS, Lower Deck } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } 10 x 10/20 10 x 10/20 Stringer Plate on ends of Main or Middle Deck } Beams, breadth and thickness . . . . . 64 1/2 10/20 72 9/20

Single or double Angle Iron on Upper Edge . . . 3 1/2 3 1/2 8/20 3 1/2 3 1/2 8/20 Is the Stringer Plate attached to the outside plating? Yes

Average space . . . . . 48 Angle Irons on ditto, No. 2 Steel . . . . . 4 x 4 9/20 4 x 4 9/20

BEAMS, Hold, or Orlop } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } 13 1/2 x 8/20 13 1/2 x 8/20 Tie Plates, outside Hatchways . . . . . 17 10/20 17 10/20

Single or double Angle Iron on Upper Edge . . . 3 1/2 3 1/2 8/20 3 1/2 3 1/2 8/20 Diagonal Tie Plates on Beams, No. of pairs

Average space . . . . . Spaced as per plan Flat of Middle Deck\* do. do. Steel 3 1/2 3 1/2

KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates . . . . . 53 x 10/20 53 x 10/20 How fastened to Beams Screw bolts & nuts

Centre Rider Plate Cellular bottom . . . . . 9/20 Stringer Plates on ends of Lower Deck, Hold or Orlop Beams . . . . . Web frames fitted in lieu of two intercostals between

Bulb Plate to Intercoastal Keelson . . . . . 4 4 9/20 4 4 9/20 Angle Irons on ditto, No. . . . . 4 x 4 9/20 4 x 4 9/20

Double Angle Iron Side Keelson . . . . . 3 1/2 3 1/2 7/20 3 1/2 3 1/2 7/20 Stringer or Tie Plates, outside Hatchways . . . Flat of Lower Deck\*

Side Intercoastal Plate Curders . . . . . 7/20 Ceiling betwixt Decks, thickness and material . . . " in hold do. Baltic 2 1/2 2 1/2

Attached to outside plating with angle iron . . . 3 1/2 3 1/2 7/20 3 1/2 3 1/2 7/20 Main piece of Rudder, diameter at head . . . 8 1/2 8 1/2

BILGE Angle Irons Tank side plate . . . . . 28 x 8/20 28 x 8/20 do. at heel . . . . . 4 4

do. Bulb Iron . . . . . 4 4 9/20 4 4 9/20 Can the Rudder be unshipped afloat? Yes

do. Intercoastal plates riveted to plating for length . . . . . 13 1/2 x 9/20 13 1/2 x 9/20 Bulkheads No. 6 No. per Rule 6

BILGE STRINGER Angle Irons Steel . . . . . 4 4 8/20 4 4 8/20 Thickness of 7/20 to 5/20

Two Intercoastal plates riveted to plating for whole length } 13 1/2 x 9/20 13 1/2 x 9/20 Height up upper deck

SIDE STRINGER Angle Irons from tank side to tank side . . . . . 4 4 8/20 4 4 8/20 How secured to sides of ship Double frames

The FRAMES extend in one length from tank side to gunwale Riveted through plates with 7/8 in. Rivets, about 6 1/2 apart.

The REVERSED ANGLE IRONS on floors and frames extend from M. D. S. Angle and to gunwale 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 1/8 in. diameter, averaging 5 1/2 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 3/4 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 all Strakes at Bilge for whole length, treble riveted with Butt Straps 4/20 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 3/4 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3 3/4 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 full length amidships. Butts of Upper or Spar Sheerstrake, treble riveted full length amidships.

Butts of Main Stringer Plate, treble riveted for full length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for full length.

Breadth of laps of plating in double riveting 5 1/2 to 6 Breadth of laps of plating in single riveting 5

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? T. & V. Riveted No. of Breasthooks, 7 Crutches, 4

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Steel angles and bulbs:-

Manufacturer's name or trade mark, Palmers & Halliwell, Plates, Consett Iron & Palmers, Steel Work and

The above is a correct description. marked R. Iron-Stockton Malleable Iron Co. & Consett Iron Co.

Builder's Signature, For C.S. Swan & Hunter Surveyor's Signature, J. H. Cooke

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



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? *None*

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 *Mainmast length extreme 76 1/2 feet. Diameter at partners 24 1/2 inches. Foremast 52 1/2 feet extreme. Diameter at the partners 24 1/2 inches. Three plate masts 6 1/6 to 3 1/6 in thickness. Seams double riveted and butts treble, and double riveted. Doubled at the partners for a length of 10 ft. Makers of Iron Caswell Iron Co.*

NUMBER for EQUIPMENT		Pathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprtd.	ANCHORS.	No.	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Suprtd.
SAILES.												
CABLES, &c.												
N.	Chain	30 1/2	2 1/6	76 1/2	300-2 1/2	House	Bower Anchors	1	40.0.14	35.16.3.14	40.0.0	House
	Fore Sails,	Breaker Strain 107%					(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)					
	Fore Top Sails,	River Wear P. House						1	30.3.14	35.13.1.21	40.0.0	House
	Fore Topmast Stay Sails,	Iron Stream Chain	90	1 3/16	25 3/8	90-1 3/16						
		or Steel Wire	Breaker Strain 38					1	34.0.0	31.12.2.0	34.0.0	House
		or Hempen Strm Cable	River Wear P. House									
	Towline, Hemp.	120	4 1/2	makers	120-4 1/2							
	Main Sails,	Steel Wire	90	3 1/2	90.3 1/2							
	Main Top Sails,	Hawser	90	10	90-9							
	and	Warp	90	6								
	Standing and Running Rigging	quality Good	90	5 1/2								
	The Windlass is	Iron Patent	Good	Capstan	Good	and Rudder	Good					
	Engine Room Skylights.	How constructed?	Iron Comings & Wood tops	How secured in ordinary weather?	Bolted down							
	What arrangements for deadlights in bad weather?	Solid Shutters & Bulls eyes										
	Coal Bunker Openings.	How constructed?	Iron Comings	How are lids secured?	Hatch bars	Height above deck?	13"					
	Scuppers, &c.	What arrangements for clearing upper deck of water, in case of shipping a sea?	Five ports each side between Poop and Forecastle besides mooring pipes.	Iron Stanchions & Rails around Poop.								
	Cargo Hatchways.	How formed?	Iron Comings & Sheeldedged riveted together.									
	State size Main Hatch	24 ft x 12 ft	Fore hatch	16 ft x 12 ft	Quarter hatch	16 ft x 12 ft + 12 ft x 12 ft						
	If of extraordinary size, state how framed and secured?	Ordinary Size										
	What arrangement for shifting beams?	Two deep web plates in m. & one in f. hatch, & bulk plate in after hatch and three										
	Hatches, If strong and efficient?	Yes Solid Hatches 3 1/2"										

Order for Special Survey No. *1944*  
Date *24 Jan'y 1887*  
Order for Ordinary Survey No. *✓*  
Date *✓*  
No. *105* in builder's yard.  
State dates of letters respecting this case *Secretary's letters dated 20<sup>th</sup> Jan'y, 10<sup>th</sup> Feb'y, 16<sup>th</sup> March, 19<sup>th</sup> May, 2<sup>nd</sup> June & 9<sup>th</sup> May 1887.*  
General Remarks (State quality of workmanship, &c.)

*This is a three decked vessel built in accordance with approved plans forwarded to the London Office on the 27<sup>th</sup> Sept'r/87, the Secretary's letters, and otherwise in conformity with the Rules. The bottom is constructed on the cellular system of the lungs and capacity set forth in form hereto attached, tested with water up to the height of load line and found satisfactory. She has a Poop 206 feet, and a Toppallt forecastle 48 feet in length. The sheerstrake is doubled for half the vessel's length amidships and the stringer plate is doubled at the front of Poop for a length of 20 feet. The general quality of the workmanship is good throughout.*

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, forecastle, or raised quarter deck. (If double bottom, state particulars on separate form.)

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

I am of opinion this Vessel should be Classed *100A1 Three decked Rule, Two decks, One steel wood covered, Two*

The amount of the Entry Fee .....£ 5 : - : - is received by me, *Titus of beams, and web frames.*

Special .....£ 115 : 8 : - *31/10/87* *J. H. Cooke*

(to be sent as per margin). Certificate gratis + *8.11.87*

(Travelling Expenses, if any, £ )

Committee's Minute *TUESDAY 4 OCT 1887*

Character assigned *100A1 Steel*

*2 Sks (steel) 2 Sks (steel) & web frames Well Dr*

*Web frames Well Deck*

*Call B.B. (particulars) Lloyd's Register*

*Foundation*