

IRON SHIPS.

No. 9893 Survey held at Sunderland Date October 26th 1869
 on the Iron Screw Steamer "Frankland" Master R Fowler
 Tonnage under tonnage deck 663.96 Built at Sunderland When built 1869 Launched 23rd Sept^r 1869
 Ditto of Break 21.96 By whom built James Lang Esq^r Owners H J Morton
 Ditto of ~~super, forecastle, or~~ 19.92 other erections on upper deck
 Ditto of ~~super, forecastle, or~~ 705.84 Gross
 Ditto of ~~super, forecastle, or~~ 28.10 Net Space
 Gross tonnage, less 677.74
 crew space 136.71
 Total Register 541.03 Port belonging to Sunderland Destined Voyage London
 as cut on beam If Surveyed while Building, Afloat, or in Dry Dock While Building.

Length 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				
196	6		28	9		16	9		90		One	Inches. In Ship.	16ths. In Ship.	Inches. required per Rule.	16ths. required per Rule.
Dimensions of Ship per Register, length 196.8 breadth 28.95 depth 16.8															
Keel, if bar iron, depth and thickness	7 x 2 3/4		Inches in Ship.		Inches required per Rule.		for 600 tons Scale.		Plates in Garboard Strakes, breadth and thickness						
if plate iron, breadth and thickness	7 x 2 3/4		7 x 2 3/4		7 x 2 3/4		7 x 2 3/4		Ditto from Garboard to upper part of Bilges						
Stem, if bar iron, moulding and thickness	7 x 2 3/4		7 x 2 3/4		7 x 2 3/4		7 x 2 3/4		from upper part of Bilge to a perpendicular height from upper side of Keel of 3/4ths the entire depth of Hold						
if plate iron, breadth and thickness	7 x 2 3/4		7 x 2 3/4		7 x 2 3/4		7 x 2 3/4		from 3/4ths depth of Hold to lower edge of Sheerstrake						
Stern-post, if bar iron, moulding and thickness	9 x 4 1/4		38 1/2 Super						Sheerstrake, breadth and thickness						
if plate iron, breadth and thickness	9 x 4 1/4		38 1/2 Super						Butt Straps to outside plating, breadth and thickness						
Distance of Frames from moulding edge to moulding edge, all fore and aft	21 ins		21						Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness						
	21 ins		21						Angle Iron on ditto						
	21 ins		21						Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways						
Frames, Size of Angle Iron, single or double	4 3 7 4 3 7		4 3 7 4 3 7		4 3 7 4 3 7		4 3 7 4 3 7		Diagonal Tie Plates on ditto						
Reversed Iron, to every frame	4 3 7 4 3 7		4 3 7 4 3 7		4 3 7 4 3 7		4 3 7 4 3 7		Planksheer, materials and scantlings						
of every alternate frame	4 3 7 4 3 7		4 3 7 4 3 7		4 3 7 4 3 7		4 3 7 4 3 7		Waterway ditto ditto						
Floors, depth and thickness of Floor Plate at mid line	19 1/4		7 full		19 1/4		19 1/4		Flat of Upper Deck, thickness and material						
Ditto ditto at Bilge Keelson	9 1/2		7 full		—		19 1/4		how fastened to Beams						
Size of Reversed Angle Iron, and No. 142 at top of Floor Plate	3 2 3/4		6 3		2 3/4		6		Ceiling betwixt Decks and in Hold, thickness and material						
Beams, Deck (N ^o . 52) double Angle Iron, including Plate, Tee, or Bulb Iron	— 7 7		7 7		7 7		7 7		Clamps or Spirketting ditto						
double or single Angle Iron, on upper edge	2 1/2 2 3/4		5 2 1/2		2 3/4		5		Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness						
average space between	alternate frames		alternate frames		alternate frames		alternate frames		Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams						
Hold, or Lower Deck (N ^o . 33) double Angle, Tee, Plate, or Bulb Iron	7 7		7 7		7 7		7 7		Stringers in Hold						
double or single Angle Iron, on upper edge	3 2 3/4		6 3		2 3/4		6		Flat of Lower Deck, thickness and material						
average space between	2 1/2 x 4 1/2		frames alternately		frames alternately		frames alternately		Main piece of Rudder, diameter at head						
Paddle, sided and moulded, thickness of Plate size of Angle Iron	—		—		—		—		at heel						
Engine	—		—		—		—		(Can the Rudder be unshipped afloat)						
Keelson, single or double plate, box, or intercostal	—		—		—		—		Bulkheads, N ^o . 4 Thickness of						
Size of Plates 2 1/2 ft. long	— 13 10		12 1/2 10		12 1/2 10		12 1/2 10		Height up						
Size of Angle Irons double top	4 1/2 3 1/2		7 4 1/2		3 1/2 7		4 1/2 3 1/2		Upper Deck						
Side, single or double, plate, box, or intercostal	—		—		—		—		enclosed after Bulkhead						
Bilge (N ^o . One) at each Bilge, single, or double, plate, or box	4 1/2 3 1/2		7 4 1/2		3 1/2 7		4 1/2 3 1/2								

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
 The reverse angle irons on the floors extend in one length near the middle line from Keel to Gunnwale
 Keelson, how are the various lengths of plates or angle irons connected? With butt straps
 Plates, Garboard, double or rivetted to keel, double or at upper edge, with rivets (1 3/4 ins.) diameter, averaging (2 3/4 ins.) apart.
 Edges from Garboards to upper part of bilge, worked clenchier, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 3/4 ins.) apart.
 Butts from Keel to turn of bilge, worked carvel with butt straps (1 3/4 ins.) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 3/4 ins.) apart.
 Edges from bilge to sheerstrake, worked carvel with a lining piece () thick, or clenchier, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 3/4 in.) apart.
 Edges of Sheerstrake, double or single rivetted? At upper edge and At lower edge double
 Butts from bilge to planksheers, worked carvel with butt straps (1 3/4 ins.) thick, double or single rivetted; with rivets (3/4 in.) diameter, averaging (2 3/4 ins.) apart. Breadth of laps in double rivetting (4 1/2) Breadth of laps in single rivetting (2 3/4)
 Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? double
 Planksheer, how secured to the plating of the sides Explain by sketch Gutter Gunnwale
 Waterway, " " planksheer and to the Beams if necessary.
 Deck Beams, how secured to the side? with Brackets which are rivetted to Beams & Frames &c
 Hold or Lower Deck ditto Do Do Do Do
 Paddle, " " Nil No. of breasthooks 4 crutches 2
 What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c?
 Manufacturer's name or trade mark Angles and Bulbs, Palmes Shipbuilding Co.
 We certify that the above is a correct description of the several particulars therein given.
 Builder's Signature For James Lang Surveyor's Signature James John Joseph

5100 - Fifth Iron

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? one piece
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 only

Her Masts, Bowsprit, Yards, &c., are in Wood 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.)

Testing Certificates of Anchors and Cables were produced issued from the Sunderland testing house a portion of the latter being tested to the breaking strain showing a margin of 53 per cent above Admiralty test for 9/16 Chain Signed J. Hartness Sup^{nt}

She has SAILS.		CABLES, &c.		Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.		N ^o .	Weight. Ex. Stock.	Test as per Certificate.	Wght req'd per Rule.	Test req'd per Rule.
12210		Chain		270	1 7/16	34	1 1/2	34	Bowers		1	16.3.7	18.2.3.7	16.3.0	18 lbs
One	Fore Sails,	Chain		60	1						1	16.3.2	18.2.3.7	16.3.0	—
	Fore Top Sails,	Hempen Stream Cable		80	9						1	14.2.7	16.6.1.21	14.0.2.7	15 17/20
	Fore Topmast Stay Sails,	Hawser		90	4										
	Main Sails,	Towlines		90	5				Stream		1	7.0.14		7.0.0	
	Main Top Sails,	Warp		90	4 1/2				including stock		1	3.2.7		3.2.0	
and		All of <u>Good</u> quality.							Kedges		1	1.3.21		1.3.0	

Her Standing and Running Rigging Galv^{ed} wire & hemp sufficient in size and good in quality.
She has one Long Boat and two others
The present state of the Windlass is good Capstan two Rudder good Pumps two, in addition to those attached to Engine

Order for Special Survey		DATES of		1st. On the several parts of the frame, when in place, and before the plating was wrought	
No. <u> </u>	Surveys held			<u>built under O.R.</u>	
Date <u> </u>	while building			<u>Surveyed 1869 June 15-26</u>	
Order for Ordinary Survey		as per		2nd. On the plating during the progress of rivetting	
No. <u> </u>	Section 18.			<u>30. July 5-6-9-15-22-28 Aug 2-24</u>	
Date <u> </u>				3rd. When the beams were in and fastened, and before the decks were laid	
				<u>September 9-21 October 25-26</u>	
				4th. When the ship was complete, and before the plating was finally coated	
				5th. After the ship was launched	

State if she has a Spar Deck No Pop Raised 2 1/2 ft or Forecastle Anchor

General Remarks, This Vessel is built for the TC Grade therefore in the column showing the requirements of Rule for the outside plating is shown 1/16 thinner than specified for the TC Class.

Her length exceeds eleven depths, and it will be seen that the sectional area of the Sheerstrake nearly equals the requirement of Section 16, when taking the above reduction into consideration.

The after Bulkhead does not reach up to the upper Deck, but has an iron platform extending from its upper part entirely round the after part of the Vessel

She has two water-ballast Tanks, one before the Engine and Boiler Room, and one abaft, the latter extending from thence aft; the top of the Tanks are 6/16 thick, the side plates are 1/16 thick, flanged and rivetted to the outside plating, and made watertight around the Frames.

The Engine Room Hatch is protected by a bridge, and enclosed with iron Bulkheads as set forth in the Rules

The main piece of Rudder is forged one piece but has no stay, fitted as per Sec. 17.

In what manner are the surfaces preserved from oxidation? Inside Cement to Bilges, paint above
Ditto ditto Outside paint; Bottom, paint composition

I am of opinion this Vessel should be Classed A.I.

The amount of the Fee£ 5 : : : is received by me,
Am JMC Special£ 4 : 4 :
Certificate (if required)£ : 5 :
Paid Vm Note annex Joseph Keen,

Committee's Minute 26th August 1870.

Character assigned