

# IRON SHIPS.

No. 2972 Survey held at West Hartlepool Date, First Survey 2<sup>nd</sup> Decr 1870 Last Survey 8<sup>th</sup> July 1871  
On the Screw Steamer "Farnley Hall" Master E. Fisher

Tonnage under Tonnage Deck <u>753.27</u>	ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>West Hartlepool</u>
Ditto of Third Spar, or of Ring Deck.	Half moulded breadth <u>14.6</u>	Half Moulded Breadth <u>14.6</u>	When built <u>1871</u> Launched <u>3<sup>rd</sup> June</u>
Di. Poop, or Gr. Dk. <u>79.47</u>	Depth from upper part of Keel to top of Upper Deck Beams <u>10.0</u>	Total Depth if three or more Decks <u>10.0</u>	By whom built <u>Irvin &amp; Co.</u>
No. of Houses Deck <u>121.00</u>	Girth of Half Midship Frame (as per Rule) <u>24.1</u>	Total Girth of Half Midship Frame <u>24.1</u>	Owners <u>Robert Irvin</u>
of Forecastle	1st Number <u>61.7</u>	3rd Number <u>Length</u>	Port belonging to <u>West Hartlepool</u>
Tonnage <u>953.74</u>	Length <u>212.3</u>	4th Number <u>Length</u>	Destined Voyage <u>Hamburg</u>
new Space, as per Rule <u>37.65</u>	2nd Number <u>13070</u>	Breadths to Length <u>aver 7</u>	If Surveyed while Building, Afloat, or in Dry Dock.
Register Tonnage, on Beam <u>305.20</u>	Depths to Length <u>Within 13</u>		
Room <u>610.89</u>			
Tonnage, as a Steamer, on Beam			

Length on deck per Rule 212 Feet. 3 Inches. Moulded Breadth 29 Feet. 1 Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule 16 Feet. 5 Inches. Power of Engines, 98 Horse. No. of Decks with flat laid One No. of Tiers of Beams One

Dimensions of Ship per Register, length 212.3 breadth 29.2 depth 16.1

in bar iron, depth and thickness <u>1/2 x 2 3/8</u>	Inches in Ship <u>1/2 x 2 3/8</u>	Inches required per Rule <u>1/2 x 2 3/8</u>	Flat Keel Plates, breadth and thickness <u>31</u>	Inches in Ship <u>9 1/6</u>	Inches required per Rule <u>30</u>	16ths required per Rule <u>9 1/6</u>
if centre through plate, depth and thickness <u>7 x 2 3/8</u>	<u>7 x 2 3/8</u>	<u>7 x 2 3/8</u>	Plates in Garboard Strakes, breadth and thickness <u>31</u>	<u>9 1/6</u>	<u>30</u>	<u>9 1/6</u>
if bar iron, moulding and thickness <u>1/2 x 4 1/4</u>	<u>1/2 x 4 1/4</u>	<u>1/2 x 4 1/4</u>	Do. from Garboard to upper part of Bilges <u>31</u>	<u>9 1/6</u>	<u>30</u>	<u>9 1/6</u>
post for Rudder do. do. <u>1/2 x 4 1/4</u>	<u>1/2 x 4 1/4</u>	<u>1/2 x 4 1/4</u>	Do. of doubling at Bilge, or increased thickness, and length applied <u>36</u>	<u>7 1/6</u>	<u>30</u>	<u>7 1/6</u>
post for Propeller <u>1/2 x 4 1/4</u>	<u>1/2 x 4 1/4</u>	<u>1/2 x 4 1/4</u>	Do. from up. part of Bilge to l. edge of Sh'rstrake <u>36</u>	<u>7 1/6</u>	<u>30</u>	<u>7 1/6</u>
ance of Frames from moulding edge to moulding edge, all fore and aft <u>22</u>	<u>22</u>	<u>22</u>	Do. Main Sheerstrake, breadth and thickness <u>36</u>	<u>7 1/6</u>	<u>30</u>	<u>7 1/6</u>
Frames, size of Angle Iron, for 1/2 length amidships <u>4 x 3</u>	<u>4 x 3</u>	<u>4 x 3</u>	Do. of d'bling at Sh'rstrake, & length applied <u>36</u>	<u>7 1/6</u>	<u>30</u>	<u>7 1/6</u>
Do. for 1/2 at each end <u>4 x 3</u>	<u>4 x 3</u>	<u>4 x 3</u>	Do. from Mn. to Up. or Spar Dk. Sh'rstrake <u>36</u>	<u>7 1/6</u>	<u>30</u>	<u>7 1/6</u>
Reversed Frames, size of Angle Iron <u>3 x 3</u>	<u>3 x 3</u>	<u>3 x 3</u>	Do. Up. or Spar Dk Sh'rstrake, brdth & thickness <u>36</u>	<u>7 1/6</u>	<u>30</u>	<u>7 1/6</u>
Floors, depth and thickness of Floor Plate at mid line for half the length amidships <u>10 1/4 x 1/2</u>	<u>10 1/4 x 1/2</u>	<u>10 1/4 x 1/2</u>	Butt Straps to outside plating, breadth & thickness <u>9 3/4</u>	<u>9 3/4</u>	<u>9 3/4</u>	<u>9 3/4</u>
Do. at the ends <u>10 1/4 x 1/2</u>	<u>10 1/4 x 1/2</u>	<u>10 1/4 x 1/2</u>	Lengths of Plating <u>6 1/2</u>	<u>6 1/2</u>	<u>6 1/2</u>	<u>6 1/2</u>
Do. do. do. at Bilge Keelson <u>16 1/2</u>	<u>16 1/2</u>	<u>16 1/2</u>	Shifts of Plating, and Stringers <u>5 1/2</u>	<u>5 1/2</u>	<u>5 1/2</u>	<u>5 1/2</u>
Do. height extended at the Bilges <u>37 1/2</u>	<u>37 1/2</u>	<u>37 1/2</u>	Gunwale Plate on ends of <u>34</u>	<u>8 1/6</u>	<u>30</u>	<u>9 1/6</u>
Beams, Upper, Spar, or Awning Deck (No. 1) single or double Angle Iron, Plate or Tee <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	Upper Deck Beams, breadth and thickness <u>4 1/2</u>	<u>3 1/2</u>	<u>4 1/2</u>	<u>3 1/2</u>
Bulb Iron <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	Angle Iron on ditto <u>4 1/2</u>	<u>3 1/2</u>	<u>4 1/2</u>	<u>3 1/2</u>
Single or double Angle Iron on Upper edge <u>4 x 3</u>	<u>4 x 3</u>	<u>4 x 3</u>	Tie Plates (fore and aft), outside Hatchways <u>10</u>	<u>8 1/6</u>	<u>10</u>	<u>8 1/6</u>
Average space <u>4 x 3</u>	<u>4 x 3</u>	<u>4 x 3</u>	Diagonal Tie Plates on Beams (No. of Pairs, 2) <u>10</u>	<u>8 1/6</u>	<u>10</u>	<u>8 1/6</u>
Beams, Main or Middle Deck (No. 2) single or double Angle Iron, Plate or Tee <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	Planksheer material and scantling <u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>
Bulb Iron <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	Waterways do. do. <u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>
Single or double Angle Iron on Upper Edge <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	Flat of Upper Deck do. do. <u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>
Average space <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	How fastened to Beams <u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>
Beams, Lower Deck, Hold or Orlop (No. 3) single or double Angle Iron, Plate or Tee <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	Stringer Plate on ends of Main or Middle Deck <u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>
Bulb Iron <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	Beams, breadth and thickness <u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>	<u>3 3/4</u>
Single or double Angle Iron on Upper Edge <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	(Is the Stringer Plate attached to the outside plating?) <u>Yes</u>			
Average space <u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	<u>3 x 2 1/2</u>	Angle Irons on ditto (No. 1) <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Keelson Centre line, single or double plate, box, or Intercoastal, size of Plates <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	Tie Plates, outside Hatchways <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Do. Bulb Plate to Intercoastal Keelson <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	Diagonal Tie Plates on Beams (No. of pairs, 2) <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Do. Size of Angle Irons <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	Waterways materials and scantlings <u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>
Do. Side Intercoastal Keelson, size of Plates <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	Flat of Middle Deck do. do. <u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>
Do. Angle Irons on tops of Floors <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	How fastened to Beams <u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>
Do. Bilge Keelson, Bulb Iron <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams <u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>
Do. do. Intercoastal plates riveted to plating for length <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	(Is the Stringer Plate attached to the outside plating?) <u>Yes</u>			
Do. do. Angle Irons <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	Angle Irons on ditto (No. 2) <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Side Stringers (No. one) size of Angle Irons <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	Stringer or Tie Plates, outside Hatchways <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Do. Intercoastal plates riveted to plating for length <u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	<u>4 1/2 x 3 1/2</u>	Flat of Lower Deck <u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>
Transoms, material <u>Plate</u> or, if none, in what manner compensated for.			Ceiling betwixt Decks, thickness and material <u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>
Knight-heads <u>Plate</u> Hawse Timbers <u>Plate</u>			Do. in hold do. do. <u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>
Windlass <u>Patent</u> Emerson's Pall Bitt <u>Iron</u>			Main piece of Rudder, diameter at head <u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>
The Frames extend in one length from <u>Keel</u> to <u>Gunwale</u>			Do. do. at heel <u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>

Reverse Angle Irons on the floors and frames extend up the middle line to above hold beam stringers and to Gunwale alternately

Are the various lengths of Plates and Angle Irons properly connected? Yes And are their butts properly shifted? Yes

Edges, Garboard, double or single Riveted to Keel, double or single at upper edge, with Rivets ( 1 in.) diameter, averaging ( 5 ins.) from centre to centre.

Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets ( 3/4 in.) diameter, averaging ( 3 1/2 ins.) from centre to centre.

Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes ( 9 1/2 x 1/2 ) thick, double or single Riveted; with Rivets ( 3/4 in.) diameter averaging ( 3 1/2 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? no

Edges from Bilge to Main Sheerstrake, worked carvel with a lining piece ( 1/2 ) thick, or clencher, double or single riveted; with rivets ( 3/4 in.) diameter, averaging ( 3 1/4 ins.) from centre to centre.

Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge single to bilge At lower edge Double

Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps ( 9 1/4 x 1/2 ) thick, double or single Riveted; with Rivets ( 3/4 in.) diameter, averaging ( 3 1/2 ins.) from centre to centre.

Butts of Main Sheerstrake, double or treble Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for 1/2 length amidships. Breadth of laps of plating in double Riveting ( 5 ) Breadth of laps of plating in single Riveting ( 2 1/2 )

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double & Treble

Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? Ends turned & lugs welded No. of Breasthooks, Five Crutches, Two

What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Good

Manufacturer's name or trade mark, Stockton & Co.

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

Builder's Signature, Irvin & Co. Surveyor's Signature, S. P. Gladstone

120N449-0034



9134  
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*  
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? *Solid in one length*  
Do the holes for riveting 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 plate and punched from the faying surfaces? *yes*  
Are there any rivets which either break into or have been put through the seams or butts of the plating? *A few in 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 riveting, quality of Materials, and if stamped with Maker's name.

State also Length and Diameter of Lower Masts and Bowsprit *Main Mast 65 ft - Diameter 19 in*  
*Fore Mast 66 ft - Diameter 19 in*  
*Mizzen Mast 77 ft - Diameter 14 in*

Number for equipment	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N <sup>o</sup> .	Weight. Ex. Stock.	Test as per Certificate.	W't req'd per Rule.	Test req'd per Rule.
<b>SAILS.</b>											
Fore Sails,						Bowers ....	3	16-3-20	10-5-0-0	16-3-4	10-5-0-0
Fore Top Sails,								16-3-0	10-0-2-14	16-3-4	10-0-2-14
Fore Topmast Stay Sails								14-0-0	15-12-2-0	14-1-4	15-12-2-0
Main Sails,						Stream ....	1	7-0-21		7-0-9	
Main Top Sails,											
and						Kedges ....	2	3-2-13		3-2-4	
								1-3-14		1-3-4	

Her Standing and Running Rigging *Wire & Hemp* sufficient in size and *good* in quality. She has *three* Long Boat and The present state of the Windlass is *good* Capstan *good* and Rudder *good* Pumps *good* 2 of *Port*

Engine Room Skylights.—How constructed? *3/4 Pine in Ceiling to top of bins* How secured in ordinary weather? *Fitted with Bulls Eyes*  
What arrangements are there for deadlights in such for bad weather? *none*

Coal Bunker Openings.—How constructed? *Iron Pipes* How are lids secured? *Bars* How high above deck? *10 inches*

Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board? *None in bulwark*

Cargo Hatchways.—How formed? *7/16 Plate riveted to beams* State size *22 ft x 11 ft - beams 30 in above De.*  
If of extraordinary size, state how framed and secured? *none*

What arrangement for shifting beams? *7/16 Plate the whole depth of coamings in frame Double angles on top edge*

Hatches, themselves, whether strong and efficient? *good* Main Hatchways.—State size *22 ft x 11 ft*

Order for Special Survey No. *363* DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought.  
Date *17th Dec 1870* Surveys held 2nd. On the plating during the progress of riveting  
Order for Ordinary Survey No. while building 3rd. When the beams were in and fastened, and before the decks were laid  
Date as per 4th. When the ship was complete, and before the plating was finally coated or cemented  
No. *10* in builder's yard. Section 18. 5th. After the ship was launched and equipped

General Remarks, *Raised Quarter Deck, frames all to the top height. Beams built 6 1/2 x 7 1/2, Double angles in top edges 2 1/2 x 2 1/2 x 7/8, Stringer plates in and 2 1/2 x 7/8, Angles in so. 4 1/2 x 3 1/2 x 7/8. Tie plates 9 3/4 x 7/8, Diagonal plates 10 x 7/8. Plating outside 7/8, Deck 3 in. 1/2 Pine. Bolts in so. 8 1/2 in. N.B. Length of Raised Deck 80 ft. 13 in.*

*Forecastle, frames all to the top height. Beams single angles 4 1/2 x 3 x 7/8, three fitted with built plates 7 x 7/8, Stringers in and 2 1/2 x 7/8, Tie plates 10 x 7/8, Plating outside 7/8, Deck 3 in. 1/2 Pine. Length of Forecastle 27 ft. 10 in.*

*Water ballast tanks fitted in fore & after hold. frames cut off connection made with three plates. Side plates 7/8, angles in so. 4 x 3 x 7/8, Web plates 5/8, angles in so. 3 x 2 1/2 x 7/8. Top plating 7/8.*

*Iron Deck fitted over engine & boiler space 7/8 plate riveted to beams, length 51 ft. 4 in.*

*Chimney 7 ft 6 in*

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, fore-castle, or raised quarter deck, or of double or part double bottom.

In what manner are the surfaces preserved from oxidation? Inside *Flat cemented with Portland Cement* Outside *other parts with Paint*

I am of opinion this Vessel should be Classed *90 A1*

The amount of the Entry Fee ..... £ *5* : 0 : 0 is received by me,

Special ..... £ *45* : 16 : 0  
Certificate .... : : :

(Travelling Expenses)  
(if any) £

Committee's Minute *18th July* 18 *71*

Character assigned *90 A1* *A & C P*

*I concur in the opinion that this vessel should be classed 90 A1. Part double bottom. J.B.M.*