

# IRON SHIP.

No. 11818 Survey held at Sunderland Date, First Survey April 18<sup>th</sup> Last Survey December 10<sup>th</sup> 1877

On the Iron Barque "Lizzie Bell" Master James Linton

**TONNAGE** under Tonnage Deck 1012.91 **ONE, OR TWO DECKED, THREE DECKED VESSEL.**  
 Ditto of Third, Spar, or Awning Deck. 32.28 **SPAR, OR AWNING-DECKED VESSEL.**  
 Ditto of 32.28 **HALF BREADTH** (moulded) 17.0 Feet.  
 Ditto of Houses on Deck 24.95 **DEPTH** from upper part of Keel to top of Upper Deck Beam 23.4  
 Ditto of Forecastle 1070.14 **GIRTH** of Half Midship Frame (as per Rule) 35.4  
 Gross Tonnage 33.92 **1st NUMBER** 75.8  
 Less Crew Space 1036.22 **1st NUMBER, if a THREE-DECKED VESSEL** [deduct 7 feet]  
**LENGTH** 206.0  
**2nd NUMBER** 15.614  
**PROPORTIONS** Breadths to Length under  
 Depths to Length—Upper Deck to Keel under  
 Main Deck ditto under

Built at Sunderland  
 When built 1877 Launched 6/11/1877  
 By whom built Robert Thompson & Co.  
 Owners Peter Sredale  
 Port belonging to Liverpool  
 Destined Voyage Bombay  
 If Surveyed while Building, Afloat, or in Dry Dock.

**NGTH** deck as per Rule 206 Feet. **BREADTH**—Moulded... 34 Feet. **DEPTH** top of Floors to Upper Deck Beams 21 Feet. **Power of Engines** 5 1/2 Horse. **N° of Decks with flat laid** 2 **N° of Tiers of Beams** 2

Dimensions of Ship per Register, length 214.5 breadth 34.4 depth 21.3

	Inches in Ship.	Inches per Rule.
<b>KEEL</b> , depth and thickness	8 1/2 x 2 1/2	8 1/2 x 2 1/2
<b>TEMP</b> , moulding and thickness	8 x 2 1/2	8 x 2 1/2
<b>TURN-POST</b> for Rudder do. do.	8 x 2 1/2	8 x 2 1/2
Distance of Frames from moulding edge to moulding edge, all fore and aft	23	23 (Class 100 ft.)
<b>FRAMES</b> , Angle Iron, for 1/2 length amidships	5 3 8/16	5 3 8/16
Do. for 1/2 at each end	5 3 7/16	5 3 7/16
<b>REVERSED FRAMES</b> , Angle Iron	3 3 7/16	3 3 7/16
<b>FLOORS</b> , depth and thickness of Floor Plate at mid line for half length amidships	23 1/2 7/16	23 1/2 7/16
thickness at the ends of vessel	11 3/4	11 3/4
depth at 1/2 the half-bdth. as per Rule height extended at the Bilges	47 8 8/16	47 8 8/16
<b>BEAMS</b> , Upper, Spar, or Awning Deck	7 7 7/16	7 7 7/16
Single or double Angle Iron, Plate or Tee Bulb Iron	3 3 7/16	3 3 7/16
Angle or double Angle Iron on Upper edge	46	46
Average space		
<b>BEAMS</b> , Main, or Middle Deck		
Single or double Angle Iron, Plate or Tee Bulb Iron		
Angle, or double Angle Iron, on Upper Edge		
Average space		
<b>BEAMS</b> , Lower Deck, Hold, or Orlop		
Single or double Angle Iron, Plate or Tee Bulb Iron	8 1/2 7/16	8 1/2 7/16
Angle or double Angle Iron on Upper Edge	3 3 7/16	3 3 7/16
Average space	46	46
<b>KEELSONS</b> , Centre line, single or double plate, box, or intercostal, Plates	16 14/16 10/16	16 17/16 7/16
" Rider Plate	11 12/16	10 3/4 13/16
" Bulb Plate to Intercostal Keelson		
" Angle Irons	5 3 1/2 9/16	5 3 1/2 9/16
" Double Angle Iron Side Keelson		
" Side Intercostal Plate		
" do. Angle Irons	5 3 1/2 9/16	5 3 1/2 9/16
" Attached to outside plating with angle iron	3 3 7/16	3 3 7/16
<b>BILGE</b> Angle Irons	5 3 1/2 9/16	5 3 1/2 9/16
" do. Bulb Iron		
" do. Intercostal plates riveted to plating for length		
<b>BILGE STRINGER</b> Angle Irons	5 3 1/2 9/16	5 3 1/2 9/16
Intercostal plates riveted to plating for length		
<b>DE STRINGER</b> Angle Irons		

**Flat Keel Plates**, breadth and thickness 34 x 1/16 10/16  
**PLATES** in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied 10 1/2 7/16  
 fm up. part of Bilge to l. edge of Sh'rstrake  
 Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.  
 Up. or Spar Dk Sh'rstrake, brdth & thickness  
 Butt Straps to outside plating, breadth & thickness 7 1/2 16 3/4 as per Rule  
 Lengths of Plating 94 7/16  
 Shifts of Plating, and Stringers two frame spaces  
 Gunwale Plate on ends of Awning, Spar, or  
 Upper Deck Beams, breadth and thickness 46 9/16  
 Angle Iron on ditto 28 8/16  
 Tie Plates fore and aft, outside Hatchways 5 x 3 1/2 x 9/16  
 Diagonal Tie Plates on Beams No. of Pairs, 2 12 x 9/16  
 Planksheer material and scantling none  
 Waterways do. do.  
 Flat of Upper Deck do. do.  
 How fastened to Beams flat iron  
 Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness 4 1/2 1/16  
 Is the Stringer Plate attached to the outside plating? yes  
 Angle Irons on ditto, No. 2  
 Tie Plates, outside Hatchways 12 x 9/16  
 Diagonal Tie Plates on Beams, No. of pairs 12 x 9/16  
 Waterways materials and scantlings 27 1/2 Baltic fir  
 Flat of Middle Deck do. do.  
 How fastened to Beams flat iron  
 Stringer Plates on ends of Lower Deck, Hold or Orlop Beams 30 8/16  
 Is the Stringer Plate attached to the outside plating? yes  
 Angle Irons on ditto, No. 2  
 Stringer or Tie Plates, outside Hatchways 12 x 9/16  
 Flat of Lower Deck 27 1/2 Baltic fir  
 Ceiling betwixt Decks, thickness and material 1 1/2 1/16  
 Main piece of Rudder, diameter at head 1 1/2  
 do. at heel 5 1/2  
 Can the Rudder be unshipped afloat? yes  
 Bulkheads No. one Thickness of 6/16 to 5/16  
 Height up Upper Deck beam  
 How secured to sides of ship Between double frames  
 Size of Vertical Angle Irons 3 x 3 1/16 and distance apart 30 ins.  
 Are the outside Plates doubled two spaces of Frames in length? Yes

ansoms, material. Knight-heads. Hawse Timbers. Iron  
 indlass Greenheart Pall Bitt Greenheart

he **FRAMES** extend in one length from Keel to Gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.

The **REVERSED ANGLE IRONS** on floors and frames extend from middle line to Gunwale and to Gunwale on 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 1/8 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 3/4 in. diameter, averaging 3 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 ins. from centre to centre.

Butts of Three Strakes at Bilge for half length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 3/4 in. diameter, averaging 3 ins. from cr. to cr.

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

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

Breadth of laps of plating in double riveting 4 1/2 Breadth of laps of plating in single riveting 3 1/2

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

away, how secured to Beams Further Gunwale (Explain by Sketch, if necessary.)

ms of the various Decks, how secured to the sides? Keels turned down and riveted. No. of Breasthooks, 5 Crutches, 4

t description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c. Angles, S. L. Iron, &c. Keels

ufacturer's name or trade mark, Sheffield, Middlesbrough, &c. (S. L. Iron) and Long's Iron Co.

The above is a correct description of Iron Ship

Builder's Signature, J. E. Thompson Surveyor's Signature, William

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

120475-0097



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? *A few in the butts only.*

Masts, Bowsprit, Yards, &c., are *Iron & wood* 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 *As per approved sketch attached. The plates were fitted with the grain to 38" and across the frame to about 13" without fracture. The makers of the plates are the Cornhill Iron Co Limited.*  
*1946 J. L. L.*

NUMBER for EQUIPMENT <i>16654</i>		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
N <sup>o</sup> .	SAILS.	CABLES, &c.					Bowers	1	30.35	24.22	30.00	28 6/10
	Fore Sails,	Chain						1	30.16	28.19	30.00	28 6/10
	Fore Top Sails,	<i>Broken chain 77 1/8</i>						1	25.32	25.12	25.20	25 3/10
	Fore Topmast Stay Sails,	<i>Tested at the R.W.C.P.S. by J. Hartness Oct 30<sup>th</sup> Nov 2<sup>nd</sup> and Oct 30 1877</i>					Stream	1	12.07	12.00	12.00	12 0/10
	Main Sails,	<i>75 15/16</i>					Kedges	1	6.04	7.50	6.00	6 0/10
	Main Top Sails,	<i>90 11</i>						1	2.310	4.15	3.00	3 0/10
	and	<i>90 5 1/2</i>										

Standing and Running Rigging *Wires, Hemp and Manila* sufficient in size and *good* in quality. She has *14* long Boats and

The Windlass is *good* Capstan *good* and Rudder *good* Pumps *good and sufficient*

Engine Room Skylights.—How constructed? *✓* How secured in ordinary weather? *✓*

What arrangements for deadlights in bad weather? *✓*

Coal Bunker Openings.—How constructed? *✓* How are lids secured? *✓* Height above deck? *✓*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *Ports and scupper each side also through the spawning pipes*

Cargo Hatchways.—How formed? *Plank & angle iron 15" in height above deck*

State size Main Hatch *11'6" x 8'* Forehatch *7'8" x 5'8"* Quarterhatch *7'8" x 5'0"*

If of extraordinary size, state how framed and secured? *Iron beam to main hatch & fore and aft*

What arrangement for shifting beams? *nuts and screws through angle iron*

Hatches, If strong and efficient? *Solid 2 1/2" fir*

Order for Special Survey No. <i>2695</i>	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	<i>Built under J.S. and Surveyed 1877 April 18 20 22 25 May</i>
Date <i>27<sup>th</sup> March 1877</i>		2nd. On the plating during the process of riveting	<i>June 14 21 22 25 28 29 31 July 25 11 12 16 19 20 26 August 12 32 13</i>
Order for Ordinary Survey No. <i>✓</i>		3rd. When the beams were in and fastened, and before the decks were laid....	<i>16 17 21 23 27 30 Sep 3 4 11 14 19 25 28 Oct 1 18 15 18 22 26 29 31 Nov 1 2 5 9 15 17 22 27</i>
Date <i>✓</i>		4th. When the ship was complete, and before the plating was finally coated or cemented..	<i>Dec 4 10</i>
No. <i>86</i> in builder's yard.		5th. After the ship was launched and equipped	

General Remarks (State quality of workmanship, &c.) *The workmanship is of good quality. This vessel has been built in accordance with the approved shipbuilding regulations sanctioned by the Secretary's letter dated the 24<sup>th</sup> of April 1877 and in general conformity with the Rules for the 100 A. class. She has a raised quarter deck about 38' long, a House on deck for the crew and a short Monkey Forecastle. The approved section above referred to is attached hereto. It will be observed that the small ledge is a few pounds light but the other is in excess of the Rule requirements.*

State if one, two, or three, decked vessel, or if spar, or running decked; and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom

How are the surfaces preserved from oxidation? Inside *Varnish and Paint.* Outside *Paint and Red Lead*

I am of opinion this Vessel should be Classed *100 A. 1.*

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

Special ... £ 50 : 18 : 0 *10<sup>th</sup> Decr. 1877*

Certificate ... " : " : "

(Travelling Expenses, if any, £ ...)

Committee's Minute *11th December, 1877.*

Character assigned *100 A. 1.*

*AD-R*

*DPW*

*38'4"*