

# IRON SHIP.

19 Feb 73  
Rec 18/12/72

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. }  
 Ditto of ~~Boys~~ Raised Cr. Dk. } 32.28 DEPTH from upper part of Keel to top of Upper Deck Beams 23.4  
 Ditto of Houses on Deck } 24.95 GIRTH of Half Midship Frame (as per Rule) 35.4  
 Ditto of Forecastle }  
 Gross Tonnage } 1070.14 1st NUMBER 75.8  
 Less Crew Space } 33.92 1st NUMBER, if a THREE-DECKED VESSEL [deduct 7 feet]  
 Engine Room }  
 Net Tonnage } 1036.22 LENGTH 206.0  
 out on Beam } 2nd NUMBER 15.614  
 PROPORTIONS—Breadths to Length under 7  
 Depths to Length—Upper Deck to Keel under 10  
 Main Deck ditto under 10

Built at Sunderland  
 When built 1877 Launched 5/11 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

Length of deck as per Rule 206 Feet. Inches. BREADTH—Moulded... 34 Feet. Inches. DEPTH top of Floors to Upper Deck Beams 21 Feet. Inches. 5 1/4 Power of Engines... — 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.		
	Inches.	16ths.	Inches.	Inches.	16ths.	Inches.
KEEL, depth and thickness	8 1/2	2 1/2	8 1/2	8 1/2	2 1/2	8 1/2
TEMP, moulding and thickness	8	2 1/2	8	8	2 1/2	8
TURN-POST for Rudder do. do.	8	2 1/2	8	8	2 1/2	8
Distance of Frames from moulding edge to moulding edge, all fore and aft	23			23 (Class 100 ft.)		
FRAMES, Angle Iron, for 2/3 length amidships	5	3	8/16	5	3	8/16
do. for 1/3 at each end	5	3	7/16	5	3	7/16
REVERSED FRAMES, Angle Iron	3	3	7/16	3	3	7/16
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	23 1/2 9/16			23 1/2 9/16		
thickness at the ends of vessel	7/16			7/16		
depth at 3/4 the half-bdth. as per Rule	11 3/4			11 3/4		
height extended at the Bilges	47			47		
BEAMS, Upper, Spar, or Awning Deck	8	8/16	8	8	8/16	8
Single or double Ang. Iron, Plate or Tee Bulb Iron	7	7/16	7	7	7/16	7
Single or double Angle Iron on Upper edge	3	3	5/16	3	3	5/16
Average space	46			46		
BEAMS, Main, or Middle Deck	8 1/2	8/16	8 1/2	8 1/2	8/16	8 1/2
Single or double Ang. Iron, Plate or Tee Bulb Iron	7 1/2	7/16	7 1/2	7 1/2	7/16	7 1/2
Single or double Angle Iron on Upper Edge	3	3	5/16	3	3	5/16
Average space	46			46		
BEAMS, Lower Deck, Hold, or Orlop	8 1/2	8/16	8 1/2	8 1/2	8/16	8 1/2
Single or double Ang. Iron, Plate or Tee Bulb Iron	7 1/2	7/16	7 1/2	7 1/2	7/16	7 1/2
Single or double Angle Iron on Upper Edge	3	3	5/16	3	3	5/16
Average space	46			46		
KEELSONS, Centre line, single or double plate, box, or intercostal, Plates	16	14/16	10/16	16	14/16	10/16
" Rider Plate	11	12/16	10/16	11	12/16	10/16
" Bulb Plate to Intercostal Keelson	5	3 1/2	9/16	5	3 1/2	9/16
" Angle Irons	5	3 1/2	9/16	5	3 1/2	9/16
" Double Angle Iron Side Keelson	5	3 1/2	9/16	5	3 1/2	9/16
" Side Intercostal Plate	5	3 1/2	9/16	5	3 1/2	9/16
" 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
BILGE Angle Irons	5	3 1/2	9/16	5	3 1/2	9/16
" do. Bulb Iron	5	3 1/2	9/16	5	3 1/2	9/16
" do. Intercostal plates riveted to plating for length	5	3 1/2	9/16	5	3 1/2	9/16
BILGE STRINGER Angle Irons	5	3 1/2	9/16	5	3 1/2	9/16
Intercostal plates riveted to plating for length	5	3 1/2	9/16	5	3 1/2	9/16
DE STRINGER Angle Irons	5	3 1/2	9/16	5	3 1/2	9/16

Flat Keel Plates, breadth and thickness ...  
 PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied ...  
 from up. part of Bilge to lr. edge of Sh'rstrake  
 Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake.  
 Up. or Spar Dk Sh'rstrake, brdth & thickness  
 Butt Straps to outside plating, breadth & thickness  
 Lengths of Plating ...  
 Shifts of Plating, and Stringers ...  
 Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness ...  
 Angle Iron on ditto ...  
 Tie Plates fore and aft, outside Hatchways ...  
 Diagonal Tie Plates on Beams No. of Pairs, 2  
 Planksheer material and scantling ...  
 Waterways do. do. ...  
 Flat of Upper Deck do. do. ...  
 How fastened to Beams ...  
 Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness ...  
 Is the Stringer Plate attached to the outside plating?  
 Angle Irons on ditto, No. ...  
 Tie Plates, outside Hatchways ...  
 Diagonal Tie Plates on Beams, No. of pairs ...  
 Waterways materials and scantlings ...  
 Flat of Middle Deck do. do. ...  
 How fastened to Beams ...  
 Stringer Plates on ends of Lower Deck, Hold or Orlop Beams ...  
 Is the Stringer Plate attached to the outside plating?  
 Angle Irons on ditto, No. 2 ...  
 Stringer or Tie Plates, outside Hatchways ...  
 Flat of Lower Deck ...  
 Ceiling betwixt Decks, thickness and material ...  
 in hold do. do. ...  
 Main piece of Rudder, diameter at head ...  
 do. at heel ...  
 Can the Rudder be unshipped afloat? ...  
 Bulkheads No. One Thickness of Upper Deck Beams ...  
 Height up Upper Deck Beams ...  
 How secured to sides of ship Between double frames ...  
 Size of Vertical Angle Irons 3 x 3 x 7/16 and distance apart 30 ins.  
 Are the outside Plates doubled two spaces of Frames in length? Yes

Transoms, material. Knight-heads. Hawse Timbers. Iron  
 Hindlass Greenheart Pall Bitt Greenheart  
 The 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 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 1/6 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 and 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 Half length amidships.  
 Butts of Main Stringer Plate, treble riveted for Half length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for Half length.  
 Breadth of laps of plating in double riveting 4 1/2 Breadth of laps of plating in single riveting 3 ins.  
 Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble and Double riveted  
 How secured to Beams Gunwale (Explain by Sketch, if necessary.)  
 How secured to the sides? Keels tumbled down and riveted No. of Breasthooks, 5 Crutches, 4  
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angles, S. Iron, and Keels  
 Manufacturer's name or trade mark, Sheffield, Malleable Iron Co. and Bolton Iron Works and Co. and other Iron Works

The above is a correct description of the ship.  
 Builder's Signature, J. Thompson Surveyor's Signature, W. Bellamy  
 Surveyor to Lloyd's Register of British and Foreign Shipping.

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**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 tested with the grain to 38" and across the grain to about 13" without fracture. The makers of the plates are the Cornwell Iron Co Limited.*  
 19463 *Iron*

NUMBER for EQUIPMENT	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.
SAILS.						Bowers	1	30.35	24.4.2.21	30.0.0	28 6/10
Fore Sails,	270	1 3/4	55 1/8	270 1 1/2	55 1/8						
Fore Top Sails,											
Fore Topmast Stay Sails,											
Main Sails,	75	15 1/8	77 1/8	77 1/8	77 1/8						
Main Top Sails,	90	11	90-15 1/8	90-15 1/8	18 1/2						
and	90	9	90-10	90-10							
	90	5 1/2	90-5 1/2	90-5 1/2							

Standing and Running Rigging *Wm. Hemp and Manila* sufficient in size and *good* in quality. She has *14* *long* Boats and *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 Scuppers each side also through the sparring pipes*

Cargo Hatchways.—How formed? *Plates & 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.	Date	Order for Ordinary Survey No.	Date	No. in builder's yard.
2695	27th March 1877			86

**General Remarks** (State quality of workmanship, &c.) *The workmanship is of good quality.*

*This vessel has been built in accordance with the approved workmanship section sanctioned by the Secretary's letter dated the 24th 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 awning decked; and the lengths of poop, forecabin, or raised quarter deck, and the length of double, or part double bottom *38'4"*  
 How are the surfaces preserved from oxidation? Inside *Keel 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, *HW*  
 Special ... £ 50 : 18 : 0 *Decr 1877*  
 Certificate ... " : " : "

Committee's Minute 11th December, 1877.  
 Character assigned *100 A. 1*  
*ADP DPW*

