

# IRON SHIP.

(... 11/27 1277)

No. 12442 Survey held at *Sunderland* Date, First Survey *March 28 1882* Last Survey *January 2 1882*

On the *Iron S.S. "Laju"*

**Tonnage under** 1883.49  
**Ditto of Third, Spar, or**  
**Awning Deck**  
**Ditto of Poop, or**  
**Raised Qr. Dk.**  
**Ditto Houses** 20.60  
**Ditto Hatchways** 5.93  
**Age** 1910.02  
**pace** 52.52  
**1854.50**  
**ine Room** 611.21  
**Tonnage** 1246.29  
**out on Beam**

**ONE, OR TWO DECKED, THREE DECKED VESSEL,**  
**SPAR, OR AWNING-DECKED VESSEL.**  
**Half Breadth** (moulded) ... 17.33  
**Depth** from upper part of Keel to top of Upper Deck Beams ... 21.62  
**Girth** of Half Midship Frame (as per Rule) ... 34.02  
**1st Number** ... 72.97  
**1st Number, if a 3 Decked Vessel** deduct 7 feet  
**Length** ... 258.75  
**2nd Number** ... 18880  
**Proportions— Breadths to Length** ... 7.4  
**Depths to Length— Upper Deck to Keel** ... 8.93  
**Main Deck ditto** ... 11.90

**Master** *Man*  
**Built at** *Sunderland*  
**When built** 1881 **Launched** 3/12/87  
**By whom built** *James Laming & Co.*  
**Owners** *Wright Bros. & Co.*  
**Residence** *3 Great St. Helen's, London*  
**Port belonging to** *London*  
**Destined Voyage** *Singapore via London*  
**Surveyed while Building, Afloat, or in Dry Dock**

**LE. H** Feet. Inches. **BREADTH—** Feet. Inches. **DEPTH** top of Floors to Upper Deck Beams ... 28 1 19 9 **Power of Engines** ... 200 **Nº. of Decks with flat laid** *Two* **Nº. of Tiers of Beams** *Three*

Dimensions of Ship per Register, length, 261 ft. breadth, 35 ft. depth, 24 ft.

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
<b>KEEL</b> , depth and thickness ...	9 1/2 x 2 1/2	9 1/2 x 2 1/2	<b>FLAT KEEL PLATES</b> , breadth and thickness ...	36	12
<b>STEM</b> , moulding and thickness ...	9 x 2 1/2	9 x 2 1/2	<b>PLATES</b> in Garboard Strakes, br'dth & thickness ...	36	12
<b>STERN-POST</b> for Rudder do. do. ...	9 x 5	9 x 5	From Garboard to upper part of Bilges ...	10 x 11 alter	10 x 11 alter
" for Propeller ...	9 x 5	9 x 5	Of d'bling at Bilge, or increased thickness, and length applied ...	Two strakes 1/16 thicker	
Distance of Frames from moulding edge to moulding edge, all fore and aft ...	24	24	From up. prt of Bilge to lr. edge of Sh'rstrake ...	10 x 11 alter	10 x 11 alter
<b>FRAMES</b> , Angle Iron, for 3/4 length amidships ...	4 1/2 3 8	4 1/2 3 8	Main Sheerstrake, breadth and thickness ...	40	13
Do. for 1/2 at each end ...	4 1/2 3 7	4 1/2 3 7	Of d'bling at Sh'rk & lng. applied ...		
<b>REVERSED FRAMES</b> , Angle Iron ...	3 3 7	3 3 7	From M'n. to Upper or Spar Dk. Sh'rstrake ...	8	8
<b>FLOORS</b> , depth and thickness of Floor Plate at mid line for half length amidships ...	22 1/2 10 1/2	22 1/2 10 1/2	Upper Spar Dk Sh'rstrake, br'dth & thckn'ss ...	40	11
" thickness at the ends of vessel ...	8 7	8 7	Butt Straps to outside plating, breadth & thickness	16 3/4 5 9 3/4	14 1/2 5 8 1/2
" depth at 3/4 the half-bdth. as per Rule ...	11 1/4 45	11 1/4 45	Lengths of Plating	12 1/2	12 1/2
" height extended at the Bilges ...	45	45	Shifts of Plating, and Stringers	4 1/2	4 1/2
<b>BEAMS, Upper, Spar, or Awning Deck</b> Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	6 1/2 6	6 1/2 6	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness ...	50	8
Single or double Angle Iron on Upper edge	3 2 3/4 5	3 2 3/4 5	Angle Iron on ditto ...	4 1/4 9	4 1/4 9
Average space ...	48	48	Tie Plates fore and aft, outside Hatchways	13	10
<b>BEAMS, Main, or Middle Deck</b> Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	6 3 8	6 3 8	Diagonal Tie Plates on Beams No. of Pairs		
Single or double Angle Iron on Upper Edge			Flat of Upper, Spar, or Awning Dk.*	3 1/2	3 1/2
Average space ...	24	24	How fastened to Beams	unt & screw bolts	
<b>BEAMS, Lower Deck</b> Single or d'ble Ang. Iron, Plate or Tee Bulb Iron			Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	37	10
Single or double Angle Iron on Upper Edge			Is the Stringer Plate attached to the outside plating?	Yes	Yes
Average space ...			Angle Irons on ditto, No. 2	4 1/4 9	4 1/4 9
<b>BEAMS, Hold, or Orlop</b> Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	9 1/2 9	9 1/2 9	Tie Plates, outside Hatchways		
Single or double Angle Iron on Upper Edge	4 4 8	4 4 8	Diagonal Tie Plates on Beams, No. of pairs		
Average space ...	as per app. plan		Flat of Middle Deck* do. do.	6 1/6 iron	6 1/6
<b>KEELSONS</b> Centre line, single or double plate, box, or Intercostal, Plates	18 13	18 13	How fastened to Beams	13 7 rivets	
Rider Plate	11 3/4 13	11 3/4 13	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	33	9
Bulb Plate to Intercostal Keelson	5 1/2 4 9	5 1/2 4 9	Is the Stringer Plate attached to the outside plating?	Yes	Yes
Angle Irons	5 1/2 4 9	5 1/2 4 9	Angle Irons on ditto, No. 2	4 1/4 9	4 1/4 9
Double Angle Iron Side Keelson	5 1/2 4 9	5 1/2 4 9	Stringer or Tie Plates, outside Hatchways		
Side Intercostal Plate	5 1/2 4 9	5 1/2 4 9	Flat of Lower Deck*		
do. Angle Irons	5 1/2 4 9	5 1/2 4 9			
Attached to outside plating with angle iron	3 3 7	3 3 7			
<b>BILGE</b> Angle Irons	5 1/2 4 9	5 1/2 4 9			
do. Bulb Iron	8 1/2 8	8 1/2 8			
do. Intercostal plates riveted to plating for length					
<b>BILGE STRINGER</b> Angle Irons	5 1/2 4 9	5 1/2 4 9			
Intercostal plates riveted to plating for length					
<b>SIDE STRINGER</b> Angle Irons					

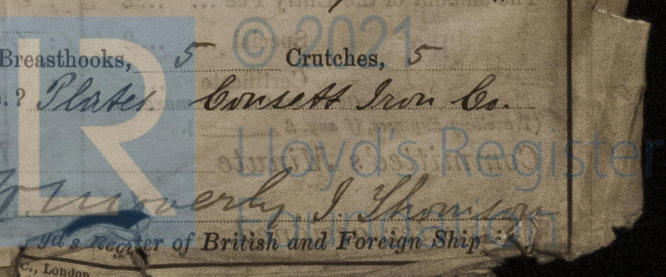
Ceiling betwixt Decks, thickness and material ...	wood sparring	
" in hold do. do. ...	2 1/2	2 1/2
Main piece of Rudder, diameter at head ...	6 3/4	6 3/4
do. at heel ...	3 1/2	3 1/2
Can the Rudder be unshipped afloat? ...	Yes	
Bulkhead No. 4 No. per Rule ...	4	
" Thickness of ...	6 1/6 to 5 1/6	
" Height up ...	3 5 upper Dk. W. S. flat aft	
" How secured to sides of ship ...	Between double frames	
" Size of Vertical Angle Irons ...	3.8.7 and distance apart 30 ins.	
" Are the outside Plates doubled two spaces of Frames in length? ...	Yes	

The **FRAMES** extend in one length from *Head* to *Gunwale* Riveted through plates with *7/8* in. Rivets, about *7* apart.  
 The **REVERSED ANGLE IRONS** on floors and frames extend from middle line to *about Main stringer* and to *Spar Dk* alternately  
**KEELSONS.** Are the various lengths of Plates and Angle Irons properly connected? *Yes* And butts properly shifted? *Yes*  
**LATING.** 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 3/4* 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 *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 *1/2* length amidships. Butts of Upper or Spar Sheerstrake, treble riveted *1/2* length amidships.  
 " Butts of Main Stringer Plate, treble riveted for *1/2* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *1/2* length.  
 " Breadth of laps of plating in double riveting *6* in. Breadth of laps of plating in single riveting *1*  
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *5* No. of Breasthooks, *5* Crutches, *5*  
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Plates, Consell Iron Co.*  
 Manufacturer's name or trade mark, *Angles & Bulbs Dorman Long & Co.*  
 The above is a correct description.  
 Builder's Signature, *James Laming* Surveyor's Signature, *W. J. ...*

State clearly where plating is of alternate thickness—as distinguished from diminished thickness at ends of vessel.

\* If Iron Deck, state if whole or part, and if wood deck is laid thereon.

SLS941-0013





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

Masts, Bowsprit, Yards, &c., are

On 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

NUMBER for EQUIPMENT	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Suprntd.
22674			135	1 3/4	55 1/2 - 44 1/8	290 - 1 3/16		Bower Anchors	9416	31-2-14	29-16-3-14	30-0-0	26 1/4 Apr 1/87
	Fore Sails,	Chain	135	1 3/4	55 1/2 - 44 1/8	290 - 1 3/16	22/12/87	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	9416	29-2-0	28-5-0-0	30-0-0	Nov 22/87
	Fore Top Sails,	Iron Stream Chain	45	1 1/16	24, 13 1/2	45 - 1 1/16	Dec 23/87		9414	25-1-7	25-1-2-7	25-2-0	Sept 24/87
	Fore Topmast Stay Sails,	or Steel Wire	90	3 1/2	24 tons	90 - 3 1/2	Certified by	Tested at R.W.C.P.Y. by J. Harkness					
	Main Sails,	or Hempen Strung Cable	90	9		90 - 9	Swansea	Stream Anchor	10014	9-0-0	11-2-2-0	9-2-0	Dec 16/87
	Main Top Sails,	Towline, Hemp	90	4 1/2		90 - 4 1/2		Kedge	6020	5-0-4	4-9-2-21	4-3-0	April 24/87
	and	Steel Wire	90	6				2nd Kedge	10023	2-2-20	5-5-0-0	2-2-0	Dec 22/87
		quality Good											

Standing and Running Rigging Wire & Hemp sufficient in size and Good in quality. She has two Life Long Boats and two others

The Windlass is Good Capstan Good and Rudder Good Pumps Good

Engine Room Skylights.—How constructed? Of Iron, on top of keel D. Head How secured in ordinary weather? Thumb screw.

What arrangements for deadlights in bad weather? Iron shutters with bulls eyes.

Coal Bunker Openings.—How constructed? of Iron How are lids secured? By bars Height above deck? 18 inches

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? Scuppers. Bulwarks partly open.

Cargo Hatchways.—How formed? Of Iron

State size Main Hatch 20'-0" x 11'-0" Forehatch 12'-0" x 10'-0" Quarterhatch 16'-0" x 11'-0" & 16'-0" x 11'-0"

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams? In the main Hatch 2 bridle beams with deep knees. In the others bridle beam

Hatches, If strong and efficient? Yes

Order for Special Survey No. 2904	1st. On the several parts of the frame, when in place, and before the plating was wrought	Brick under S.S. and Surveyed 1881 March 28 June 3 14 20
Date 27 April 81	2nd. On the plating during the process of riveting	22 27 July 14 9 15 21 August 2 12 20 22 21 Sept 2 13 14 19 26 30
Order for Ordinary Survey No.	3rd. When the beams were in and fastened, and before the decks were laid....	29 Oct 5 10 12 7 Nov 1 14 10 12 14 15 17 19 21 23 25 28 Dec 5 15 16 16
Date	4th. When the ship was complete, and before the plating was finally coated or cemented..	19 21 22 23 24 25/82 Lamp 2
No. 240 in builder's yard.	5th. After the ship was launched and equipped	

General Remarks (State quality of workmanship, &c.) This vessel has been built in accordance with the enclosed tracings of Midship Section, longitudinal elevation the Committee's letter of the 25<sup>th</sup> March 1881 and in conformity with the Rules for the contemplated class; Water ballast tanks are fitted in the fore and after holds, both of which have been satisfactorily tested by a head of water equal to the height of the load line. The workmanship throughout is very good.

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

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

I am of opinion this Vessel should be Classed 100A 1 Spar Deck

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

Special ... £ 41 : 9 : 0 6 Lamp 1882

Certificate ... (to be sent as per margin).

(Travelling Expenses, if any, £ ...).

Committee's Minute

Character assigned

Tuesday, January, 10th, 1882.

J. Mowbray, Joseph Thomson  
Surveyor to Lloyd's Register of British and Foreign Shipping

This vessel has been surveyed in accordance with the approved drawings and is classed 100A 1 Spar Deck

Lloyd's Register of Shipping