

IRON SHIPS.

No. 2583 Survey held at Madras Date, First Survey May 19 1871 Last Survey Nov 18 1871

On the S.S. Lotus Master John Gibson

Tonnage under Tonnage Deck <u>357.25</u>	ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>Madras</u>
Ditto of Third Spar, or Awning Deck. <u>205.0</u>	Half moulded breadth <u>12.5</u>	Half Moulded Breadth.....	When built <u>1871</u> Launched <u>Feb 1871</u>
Ditto of Poop, or Raised Q. Dk. <u>P. 64</u>	Depth from upper keel to top of upper Deck Beam <u>14.25</u>	Total Depth if three or more Decks.....	By whom built <u>Thos. Hall Russell & Co</u>
No. of Houses on Deck... <u>P. 64</u>	Girth of Midship Frame as per Rule <u>23.33</u>	Total Girth of Half Midship Frame.....	Owners <u>E. M. De Bussche</u>
Less Tonnage as per Rule <u>564.89</u>	2nd Number <u>8403.4214</u>	3rd Number.....	Port belonging to <u>London</u>
Register Tonnage, as a Steamer, cut on Beam <u>357.25</u>	Length <u>101.8</u>	Length.....	Destined Voyage <u>India</u>
	4th Number <u>5.4</u>	4th Number....	If Surveyed while Building, Afloat, or in Dry Dock.
	Depths to Length <u>11.4</u>	Breadths to Length <u>5.4</u>	<u>Under special survey</u>

Length on deck as per Rule <u>101.8</u>	Feet. Inches. Moulded Breadth <u>12.5</u>	Feet. Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule <u>12.9 1/2</u>	Power of Engines <u>10</u>	Horse. <u>10</u>	No. of Decks with flat laid <u>2</u>	No. of Tiers of Beams <u>2</u>
Dimensions of Ship per Register, length <u>101.8</u> breadth <u>12.5</u> depth <u>11.4</u>						
Keel, if bar iron, depth and thickness <u>6 1/2 x 2</u>	Inches in Ship. <u>6 1/2 x 2</u>	Inches required per Rule. <u>6 1/2 x 2</u>	Flat Keel Plates, breadth and thickness <u>30</u>	Inches. In Ship. <u>30</u>	16ths. In Ship. <u>16</u>	Inches. required per Rule. <u>16</u>
Do. if centre through plate, depth and thickness <u>6 1/2 x 2</u>	<u>6 1/2 x 2</u>	<u>6 1/2 x 2</u>	Plates in Garboard Strakes, breadth and thickness <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Do. if bar iron, moulding and thickness <u>4 x 3 3/4</u>	<u>4 x 3 3/4</u>	<u>4 x 3 3/4</u>	Do. from Garboard to upper part of Bilges <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Do. for Rudder <u>4 x 3 3/4</u>	<u>4 x 3 3/4</u>	<u>4 x 3 3/4</u>	Do. of doubling at Bilge, or increased thickness, and length applied <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Do. for Propeller <u>27</u>	<u>27</u>	<u>27</u>	Do. from up. part of Bilge to lr. edge of Sh'rstrake <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Distance of Frames from moulding edge to moulding edge, all fore and aft <u>27</u>	<u>27</u>	<u>27</u>	Do. Main Sheerstrake, breadth and thickness <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Frames, size of Angle Iron, for 1/2 length amidships <u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	Do. of d'bling at Sh'rstrake, & length applied <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Do. for 1/2 at each end <u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	Do. from M. to Upr. or Spar Dk. Sh'rstrake <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Reversed Frames, size of Angle Iron <u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	Do. Up. or Spar Dk. Sh'rstrake, brdth & thickness <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Floors, depth and thickness of Floor Plate at mid line for half the length amidships <u>15</u>	<u>15</u>	<u>15</u>	Butt Straps to outside plating, breadth & thickness <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Do. at the ends <u>24 1/2 x 30</u>	<u>24 1/2 x 30</u>	<u>24 1/2 x 30</u>	Lengths of Plating <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Do. do. do. at Bilge Keelson <u>8</u>	<u>8</u>	<u>8</u>	Shifts of Plating, and Stringers <u>2 frame shift 2 frame shift</u>	<u>2 frame shift 2 frame shift</u>	<u>2 frame shift 2 frame shift</u>	<u>2 frame shift 2 frame shift</u>
Do. height extended at the Bilges <u>30</u>	<u>30</u>	<u>30</u>	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Beams, Upper, Spar, or Awning Deck (No.) single or double Angle Iron, Plate or Tee Bulb Iron <u>4 3</u>	<u>4 3</u>	<u>4 3</u>	Angle Iron on ditto <u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>
Single or double Angle Iron on Upper edge <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Tie Plates (fore and aft), outside Hatchways <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Average space <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Diagonal Tie Plates on Beams (No. of Pairs) <u>4 x 12</u>	<u>4 x 12</u>	<u>4 x 12</u>	<u>4 x 12</u>
Beams, Main or Middle Deck (No.) single or double Angle Iron, Plate or Tee Bulb Iron <u>6 3</u>	<u>6 3</u>	<u>6 3</u>	Planksheer material and scantling <u>4 x 12</u>	<u>4 x 12</u>	<u>4 x 12</u>	<u>4 x 12</u>
Single, or double Angle Iron, on Upper Edge <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Waterways do. do. <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Average space <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Flat of Upper Deck do. do. <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Beams, Lower Deck, Hold or Orlop (No.) single or double Ang. Iron, Plate or Tee Bulb Iron <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	How fastened to Beams <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Single or double Angle Iron on Upper Edge <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness <u>30</u>	<u>30</u>	<u>16</u>	<u>16</u>
Average space <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	(Is the Stringer Plate attached to the outside plating?) <u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Keelson Centre line, single or double plate, box, or intercostal, size of Plates <u>15</u>	<u>15</u>	<u>15</u>	Angle Irons on ditto (No.) <u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>
Do. Bulb Plate to intercostal Keelson <u>12</u>	<u>12</u>	<u>12</u>	Tie Plates, outside Hatchways <u>12 x 3 1/2</u>	<u>12 x 3 1/2</u>	<u>12 x 3 1/2</u>	<u>12 x 3 1/2</u>
Do. Size of Angle Irons <u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	Diagonal Tie Plates on Beams (No. of pairs) <u>10 x 3 1/2</u>	<u>10 x 3 1/2</u>	<u>10 x 3 1/2</u>	<u>10 x 3 1/2</u>
Do. Side Intercostal Keelson, size of Plates <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Waterways materials and scantlings <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Do. Angle Irons on tops of Floors <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Flat of Middle Deck do. do. <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Do. Bilge Keelson, Bulb Iron <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	How fastened to Beams <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Do. do. Intercostal plates riveted to plating for length <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Do. do. Angle Irons <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	(Is the Stringer Plate attached to the outside plating?) <u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Side Stringers (No.) size of Angle Irons <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	Angle Irons on ditto (No.) <u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>	<u>3 1/2 x 3 1/2</u>
Do. Intercostal plates riveted to plating for length <u>3 1/2</u>	<u>3 1/2</u>	<u>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>
Transoms, material <u>Iron plates</u> or, if none, in what manner compensated for. <u>Iron plates</u>	<u>Iron plates</u>	<u>Iron plates</u>	Flat of Lower Deck <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Knight-heads <u>Iron plates</u> Hawse Timbers <u>Iron plates</u>	<u>Iron plates</u>	<u>Iron plates</u>	Ceiling betwixt Decks, thickness and material <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
Windlass <u>Iron plates</u> Pall-Bitt <u>Iron plates</u>	<u>Iron plates</u>	<u>Iron plates</u>	Do. in hold do. <u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>	<u>3 1/2</u>
The Frames extend in one length from <u>Keel</u> to <u>Gunwale</u>	<u>Keel</u>	<u>Gunwale</u>	Main piece of Rudder, diameter at head <u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>	<u>4 1/4</u>
The Reverse Angle Irons on the floors and frames extend <u>from upper part of Bilge to upper part of Main Deck</u>	<u>from upper part of Bilge to upper part of Main Deck</u>	<u>from upper part of Bilge to upper part of Main Deck</u>	Do. do. at heel <u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>	<u>2 1/2</u>
Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u>	<u>Yes</u>	<u>Yes</u>	(Can the Rudder be unshipped afloat?) <u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Plates, Garboard, double or <u>single</u> Riveted to Keel, double or <u>single</u> at upper edge, with Rivets <u>1/2</u> in. diameter, averaging <u>4 1/2</u> ins. from centre to centre.	<u>single</u>	<u>1/2</u>	Bulkheads No. <u>4</u> Thickness of <u>3 1/2</u>	<u>4</u>	<u>3 1/2</u>	<u>3 1/2</u>
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or <u>single</u> Riveted; with Rivets <u>1/2</u> in. diameter, averaging <u>4 1/2</u> ins. from centre to centre.	<u>single</u>	<u>1/2</u>	Do. Height up <u>to top of Main Deck</u>	<u>to top of Main Deck</u>	<u>to top of Main Deck</u>	<u>to top of Main Deck</u>
Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes <u>3 1/2</u> thick, double or <u>single</u> Riveted; with Rivets <u>1/2</u> in. diameter averaging <u>4 1/2</u> ins. from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>No</u>	<u>single</u>	<u>1/2</u>	Do. How secured to the sides of the ship <u>between two frames</u>	<u>between two frames</u>	<u>between two frames</u>	<u>between two frames</u>
Do. of Strakes at Bilge for <u>length</u> , treble riveted with Butt Straps <u>thicker than their plates</u>	<u>length</u>	<u>thicker than their plates</u>	Do. Size of Vertical Angle Irons <u>3 1/2</u> and their distance apart, <u>30</u> ins.	<u>3 1/2</u>	<u>30</u>	<u>30</u>
Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets <u>1/2</u> in. diameter, averaging <u>4 1/2</u> ins. from centre to centre.	<u>length</u>	<u>thicker than their plates</u>	Do. Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, <u>double</u> or single Riveted. At upper edge <u>single</u> At lower edge <u>double</u>	<u>length</u>	<u>thicker than their plates</u>	Riveted through plates with <u>1/2</u> in. Rivets, about <u>1</u> apart.	<u>1/2</u>	<u>1</u>	<u>1</u>
Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps <u>3 1/2</u> thick, double or <u>single</u> Riveted; with Rivets <u>1/2</u> in. diameter, averaging <u>4 1/2</u> ins. from centre to centre.	<u>length</u>	<u>thicker than their plates</u>	The Frames extend in one length from <u>Keel</u> to <u>Gunwale</u>	<u>Keel</u>	<u>Gunwale</u>	<u>Keel</u>
Do. Butts of Main Sheerstrake, double or <u>treble</u> Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or <u>treble</u> Riveted for <u>length</u> amidships. Breadth of laps of plating in double Riveting <u>4 1/2</u> in. Breadth of laps of plating in single Riveting <u>2 1/2</u> in.	<u>length</u>	<u>thicker than their plates</u>	The Reverse Angle Irons on the floors and frames extend <u>from upper part of Bilge to upper part of Main Deck</u>	<u>from upper part of Bilge to upper part of Main Deck</u>	<u>from upper part of Bilge to upper part of Main Deck</u>	<u>from upper part of Bilge to upper part of Main Deck</u>
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? <u>double</u>	<u>length</u>	<u>thicker than their plates</u>	Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Planksheer, how secured to the plating of the sides? <u>Welded</u> Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.) <u>Welded</u>	<u>length</u>	<u>thicker than their plates</u>	Plates, Garboard, double or <u>single</u> Riveted to Keel, double or <u>single</u> at upper edge, with Rivets <u>1/2</u> in. diameter, averaging <u>4 1/2</u> ins. from centre to centre.	<u>single</u>	<u>1/2</u>	<u>1/2</u>
Beams of the various Decks, how secured to the sides? <u>Welded</u> No. of Breasthooks, <u>four</u> Crutches, <u>four</u>	<u>length</u>	<u>thicker than their plates</u>	Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or <u>single</u> Riveted; with Rivets <u>1/2</u> in. diameter, averaging <u>4 1/2</u> ins. from centre to centre.	<u>single</u>	<u>1/2</u>	<u>1/2</u>
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>Iron plates</u>	<u>length</u>	<u>thicker than their plates</u>	Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes <u>3 1/2</u> thick, double or <u>single</u> Riveted; with Rivets <u>1/2</u> in. diameter averaging <u>4 1/2</u> ins. from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>No</u>	<u>single</u>	<u>1/2</u>	<u>No</u>
Manufacturer's name or trade mark, <u>Palmer & Co. Madras</u>	<u>length</u>	<u>thicker than their plates</u>	Do. of Strakes at Bilge for <u>length</u> , treble riveted with Butt Straps <u>thicker than their plates</u>	<u>length</u>	<u>thicker than their plates</u>	<u>thicker than their plates</u>
We certify that the above is a correct description of the several particulars therein given.	<u>length</u>	<u>thicker than their plates</u>	Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets <u>1/2</u> in. diameter, averaging <u>4 1/2</u> ins. from centre to centre.	<u>length</u>	<u>thicker than their plates</u>	<u>thicker than their plates</u>
Builder's Signature, <u>Hall Russell & Co.</u> Surveyor's Signature, <u>L. H. Little</u>	<u>length</u>	<u>thicker than their plates</u>	Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, <u>double</u> or single Riveted. At upper edge <u>single</u> At lower edge <u>double</u>	<u>length</u>	<u>thicker than their plates</u>	<u>thicker than their plates</u>

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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
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? Yes
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? 2 in corner of 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 Length of Main Mast 64 Feet 15 1/2, Main Mast of Top Mast 15 1/2, Bowsprit 12 1/2

Tested by R. D. Dime at Low Water
Bristol 10 up to 10 1/2 1871

Tested by R. D. Dime at Low Water
Bristol 10 up to 10 1/2 1871

Number for equipment		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.	W't req'd per Rule.	Test req'd per Rule.
SAILS.		210	1 1/2	25 1/2	1 1/2	22 1/2	Bowers	3	12.1.16	12.15.7.0	10.0.0	12
CABLES, &c.							(State Machine where Tested, and name of Superintendent).					
N ^o .	Fore Sails,	Chain					Stream	1	5.0.20	4.3.0		
	Fore Top Sails,	Hempen Stream					Kedges	2	2.7.10	2.1.0		
	Fore Topmast Stay Sails	Cable	45	9 1/2	8 1/2							
	Main Sails,	Hawser	20	6 1/2	5 1/2							
	Main Top Sails,	Towlines ...	20	5 1/2								
		Warp	20	5 1/2								
		All of quality	20	5 1/2								

Her Standing and Running Rigging Good sufficient in size and good in quality. She has 22 Long Boat and 23 Life Boat

The present state of the Windlass is Good Capstan Good and Rudder Good Pumps 2 6 in. Hand Operated

Engine Room Skylights.—How constructed? Wrought iron frame with thick glass How secured in ordinary weather? Ported to Chambers

What arrangements are there for deadlights in such for bad weather? None covered with tarpaulins

Coal Bunker Openings.—How constructed? Iron frame with thick glass How are lids secured? With bolts How high above deck? 18 in.

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? Three scuppers on each side of Main Deck

Cargo Hatchways.—How formed? Iron frame with thick glass State size 10 ft by 10 ft

If of extraordinary size, state how framed and secured? Medium size

What arrangement for shifting beams? None

Hatches, themselves, whether strong and efficient? Yes Main Hatchways.—State size 10 ft by 10 ft

Order for Special Survey No. 113 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought Built under

Date 11 March 1871 Surveys held 2nd. On the plating during the progress of riveting Special Survey from the

Order for Ordinary Survey No. 114 while building 3rd. When the beams were in and fastened, and before the decks were laid 19 May 1871

Date 19 May 1871 as per 4th. When the ship was complete, and before the plating was finally coated or cemented 10 June 1871

No. 180 in builder's yard. Section 18. 5th. After the ship was launched and equipped 1871

General Remarks,

Built in accordance with accompanying approved Machinery Section, submitted; and sanctioned, as per Secretary's letter dated August 2nd 1871
The additional tie plates 10 x 9/16 have been fitted on Main Deck Beams as per Secretary's letter dated Aug 2nd 1871

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 Painted Outside Painted

I am of opinion this Vessel should be Classed 80A

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

Special £ 22 : 0 : 0

Certificate Gratis

(Travelling Expenses) (if any) £ None

Committee's Minute 28th November 1871

Character assigned 80A