

IRON SHIPS.

Rev 10/12/72

No. 10480 Survey held at Switzerland Date, First Survey 22nd May Last Survey 3rd Dec 1872
On the Steamer "Leus" Master Morgan
Tonnage under Tonnage Deck 802.64 **ONE, OR TWO DECKED, SPAR, OR AWNING DECKED VESSELS.** Built at Switzerland
Ditto of Third Spar, or Awning Deck. 181.82 Half moulded breadth 15.54 Total Depth if three or more Decks 18.72 When built 1872 Launched Sept 13/72
Ditto of Poop, or Raised Or. Dk. 4.67 Total Girth of Half Midship Frame 29.9 By whom built Bartram Haswell & Co.
Ditto of Houses on Deck 26.91 3rd Number 63.14 Length 219.4 Owners C. J. Brightman & Co
Ditto of Forecastle 1016.04 4th Number 13.918 Port belonging to London
Gross Tonnage 41.16 2nd Number 13.918 Destined Voyage
Crew Space, as per Rule 325.13 Depths to Length Under 12 Breadths to Length Under 8
Register Tonnage, as a 649.75 If Surveyed while Building, Afloat, or in Dry Dock.

Length on deck as per Rule, 218 Feet. 4 Inches. Moulded Breadth, 30 Feet. 0 Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule 18.54 Feet. 0 Inches. Power of Engines, 98 Horse. No. of Decks with flat laid one No. of Tiers of Beams two

Dimensions of Ship per Register, length 220.8 breadth 30.15 depth 16.85

	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.
Keel, if bar iron, depth and thickness	8 x 2 1/2	8 x 2 1/2						
Do. if centre through plate, depth and thickness	8 x 2 3/8	7 1/2 x 2 3/8						
Stem, if bar iron, moulding and thickness	8 1/2 x 4 1/2	3 5/8 Super						
Stern-post for Rudder do.	8 1/2 x 4 1/2	23						
Stern-post for Propeller	23	(Class 90A)						
Distance of Frames from moulding edge to moulding edge, all fore and aft	23							
Frames, size of Angle Iron, for 1/2 length amidships	4 x 3	4 x 3						
Do. for 1/4 at each end	4 x 3	4 x 3						
Reversed Frames, size of Angle Iron	3 x 3	3 x 3						
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	18	18						
Do. at the ends	11	11						
Do. do. do. at Bilge Keelson	36	36						
Do. height extended at the Bilges								
Beams, Upper, Spar, or Awning Deck (No. single or double Angle Iron, Plate or Tee Bulb Iron)								
Single or double Angle Iron on Upper edge								
Average space								
Beams, Main or Middle Deck (No. single or double Angle Iron, Plate or Tee Bulb Iron)								
Single or double Angle Iron, on Upper Edge								
Average space								
Beams, Lower Deck, Hold or Orlop (No. single or double Angle Iron, Plate or Tee Bulb Iron)								
Single or double Angle Iron on Upper Edge								
Average space								
Keelson Centre line, single or double plate, box, or intercostal, size of Plates	13 1/2	13 1/2						
Do. Bulb Plate to Intercostal Keelson	8 1/2	8 1/2						
Do. Size of Angle Irons	5 x 3 1/2	5 x 3 1/2						
Do. Side Intercostal Keelson, size of Plates								
Do. Angle Irons on tops of Floors	5 x 3 1/2	5 x 3 1/2						
Do. Bilge Keelson, Bulb Iron								
Do. do. Intercostal plates riveted to plating for length								
Do. do. Angle Irons	5 x 3 1/2	5 x 3 1/2						
Side Stringers (No. /) size of Angle Irons	5 x 3 1/2	5 x 3 1/2						
Do. Intercostal plates riveted to plating for length								
Transoms, material <u>Iron</u> or, if none, in what manner compensated for.								
Knight-heads <u>Iron</u> Hawse Timbers <u>Iron</u>								
Windlass <u>Iron Patent</u> Pall Bitt <u>nil</u>								
The Frames extend in one length from <u>Keel</u> to <u>Gunnels</u>								
The Reverse Angle Irons on the floors and frames extend <u>across</u> the middle line <u>on every frame</u> to <u>above hold beam</u> and to <u>Gunnels</u> alternately								
Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u> And are their butts properly shifted? <u>Yes</u>								
Plates, Garboard, double or Riveted to Keel, double or at upper edge, with Rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre.								
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre.								
Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (1/16 thick, double or single Riveted; with Rivets (3/4 in.) diameter averaging (3 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>alternate strakes</u>								
Do. of 2 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/16 thicker than their plates.								
Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece (1/16 thick, or clencher, double or single riveted; with rivets (3/4 in.) diameter, averaging (3 ins.) from centre to centre.								
Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge <u>to Gunnel</u> At lower edge <u>double</u>								
Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (1/16 thick, double or single Riveted; with Rivets (3/4 in.) diameter, averaging (3 1/2 ins.) from centre to centre.								
Do. 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 (4 1/2) Breadth of laps of plating in single Riveting (2 1/2)								
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted?								
Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.) <u>Butt</u>								
Beams of the various Decks, how secured to the sides? <u>Riveted to Frames & Stringers</u> No. of Breasthooks, <u>5</u> Crutches, <u>3</u>								
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>For Shipping purposes</u>								
Manufacturer's name or trade mark, <u>Kato Malleable Iron & Hardware, Angle, Slipper Road, &c.</u>								

We certify that the above is a correct description of the several particulars therein given.
Builder's Signature, Bartram Haswell & Co Surveyor's Signature, W. H. Martin

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? Single Piece
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes Generally 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 only

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

10870 Iron

No 15237
One link of the chain cable marked R.W.C No. 37 was found defective, on being ranged on deck, this link has since been removed & replaced by a new one, and the length of chain (15 fathoms) retested and endorsed on the certificate of test.

No.	SAILS.	CABLES, &c.	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.
	Fore Sails,	Chain	135	1 1/2	37 20	1 1/2	37 20	Bowers	3	18.3.24	15.17.20	18.0.0	15.0.0
	Fore Top Sails,	(State Machine where Tested, and name of Superintendent).	135	1 1/2	37 20	1 1/2	37 20	Stream	1	18.3.16	19.15.17	18.0.0	15.0.0
	Fore Topmast Stay Sails	Hempen Stream	90	9	1 Sample tested to over pivot chain for 1 1/2 showing may be			Kedges	2	16.3.24	18.5.0.0	15.0.0	16.4.2
	Main Sails,	Cable	78	1 1/2	37 20								
	Main Top Sails,	Hawser	90	7	18. 43 70								
		Towlines	90	7	18. 43 70								
		Warp	90	5	18. 32 70								
		All of <u>1/2</u> quality.	90	5	18. 32 70								

Her Standing and Running Rigging Complete sufficient in size and good in quality. She has 1 Life Long Boat and 2 others

The present state of the Windlass is Good Capstan St. Minke and Rudder Good Pumps Good

Engine Room Skylights. How constructed? Strong & I Seal w/ Grame How secured in ordinary weather? Screws & Bars

What arrangements are there for deadlights in such for bad weather? Screws, Bars, Grating & Cover

Coal Bunker Openings. How constructed? Iron How are lids secured? Bars How high above deck? 15

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? Side Ports

Cargo Hatchways. How formed? Strong Plate & Angle State size 21 ft. by 10 ft. with aux plate beam strong

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

What arrangement for shifting beams? ✓

Hatches, themselves, whether strong and efficient? Good Main Hatchways. State size 19 ft. by 10 ft. with aux plate beam strong

Order for Special Survey No. 235 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought 11th March 1892

Date 13th March 1892 Surveys held 2nd. On the plating during the progress of riveting 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th

Order for Ordinary Survey No. 1 while building 3rd. When the beams were in and fastened, and before the decks were laid 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th

Date 13th March 1892 as per 4th. When the ship was complete, and before the plating was finally coated or cemented 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th 13th 14th 15th 16th 17th 18th 19th 20th 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th

No. 69 in builder's yard. Section 18. 5th. After the ship was launched and equipped 21st 22nd 23rd 24th 25th 26th 27th 28th 29th 30th

General Remarks, The angle Irons forming the Middle line Keelson (double top & bottom) Bilge with (2) double angle Iron Stinger in lower hold together with the Gunwale Angle Iron are all 1/6 in excess of the Rules, & the Sheerstrakes are 6 inches wider. The Full Poop is about 123 feet long from the Sternpost. The Main Deck Stinger Plate at fore part of Poop is doubled with 8/16 plates 3 ft 7 in broad and about 25 feet in length. The Main Sheerstrake is also doubled with 8/16 Plate about the same length. This is the ship the Committee found bad holes in two outside plates, in consequence of the frames having been forced out of their place for want of a rivet put in each frame when the plates were first wrought. A drifting punch brought them so as a 1/8 riser made the holes fair & that size rivets have been put in, and all the frames at this part have additional Angle Irons on them & rivetted to outside plates & the frames to which they are attached, making them very strong. The after double bottom is about 58 ft long & the Fore with 53 ft long. Jas Gibson has joined me in holding Special Survey on this vessel in compliance with the Committee request in August last.

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, forecabin, or raised quarter deck, or of double or part double bottom. 123 ft 28 ft

In what manner are the surfaces preserved from oxidation? Inside Red Paint & Cement Outside Red Paint

I am of opinion this Vessel should be Classed 90 A1

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

Special £ 48 : 14 : : Jas Gibson

Certificate : : : : Jas Gibson

(Travelling Expenses) (if any) £ 13th Decr 1892

Committee's Minute 13th Decr 1892

Character assigned 90 A1

11th Decr 1892

M.C. pt double bottom

11th Decr 1892

11th Decr 1892

11th Decr 1892

11th Decr 1892