

IRON SHIPS.

IRN 0063

No 30/3/71

No. 11304 Survey held at Newcastle Date, first Survey 15th June 1870 Last Survey 15th March 1871

on the Steamer "Canton" Master John L. Jacques

Tonnage under Tonnage Deck	<u>1845.30</u>	ONE, OR TWO DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>Newcastle</u>
Ditto of Spar Deck, or Lower Deck		Half moulded breadth ...	Half Moulded Breadth ...	When built <u>1870</u> Launched <u>Dec 22/70</u>
Ditto of Upper Deck		Depth from upper part of Keel to top of Upper Deck Beams ...	Total Depth if three or more Decks ...	By whom built <u>C. Mitchell & Co</u>
Ditto of Houses on Deck ...	<u>18.02</u>	Girth of Half Midship Frame ...	Total Girth of Half Midship Frame ...	Owners <u>Edmund H. Watts</u>
Ditto of Forecastle	<u>17.35</u>	1st Number ...	3rd Number ...	Port belonging to <u>London</u>
Gross Tonnage	<u>1880.67</u>	Length ...	Length ...	Destined Voyage <u>India</u>
Crew Space, as per Rule	<u>13.17</u>	2nd Number ...	4th Number ...	If Surveyed while Building, Afloat, or in Dry Dock
Register Tonnage, as per Rule	<u>610.18</u>	Depths to Length ...	Breadths to Length ...	<u>While building</u>
Register Tonnage, as a Steamer, put on the Beam	<u>1215.69</u>			

Length on deck as per Rule, 287 ⁶/₁₆ Moulded Breadth, 35 ¹/₁₆ Depth from top of Keel to Deck Beam, as per Rule ... } 27 ⁹/₁₆ Horse, 200 No. of Decks, Three No. of Tiers of Beams, Three

Dimensions of Ship per Register, length 290.6 breadth, 35.3 depth, 25.4

	Inches in Ship	Inches required per Rule		Inches in Ship	Inches required per Rule
Keel, if bar iron, depth and thickness	<u>8 x 3</u>	<u>10 x 2 1/2</u>	Flat Keel Plates, breadth and thickness		
Do. if centre through plate, depth and thickness			Plates in Garboard Strakes, breadth and thickness	<u>36</u>	<u>12</u> <u>36</u> <u>12</u>
Stem, if bar iron, moulding and thickness	<u>8 x 3</u>	<u>10 x 2 1/2</u>	Do. from Garboard to upper part of Bilges	-	<u>11</u> - <u>11</u>
Stern-post do. do. do.	<u>8 x 6 1/2</u>	<u>10 x 5</u>	Do. of doubling at Bilge, or increased thickness, and length applied	<u>9</u>	<u>10</u> <u>10</u>
Distance of Frames from moulding edge to moulding edge, all fore and aft	<u>24</u>	<u>24</u>	Do. from upper part of Bilge to lower edge of Sheerstrake	-	<u>10</u> <u>10</u>
Frames, size of Angle Iron, for 2/3 length amidships	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>	Do. Sheerstrake, breadth and thickness	<u>36</u>	<u>13</u> <u>36</u> <u>13</u>
Do. for 1/3 at each end	<u>4 1/2 x 3</u>	<u>4 1/2 x 3</u>	Do. of doubling at Sheerstrake, and length applied	<u>36</u>	<u>10</u> <u>36</u> <u>10</u>
Reversed Frames, size of Angle Iron	<u>3 x 3</u>	<u>3 x 3</u>	Butt Straps to outside plating, breadth and thickness	<u>9 1/2 x 4 1/2</u>	<u>8</u> <u>13</u> <u>9 1/2 x 4 1/2</u> <u>8</u> <u>13</u>
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	<u>25</u>	<u>25</u>	Lengths of Plating	<u>10 ft.</u>	<u>10 ft.</u>
Do. at the ends	<u>25</u>	<u>25</u>	Shifts of Plating, and Stringers	<u>4</u>	<u>4</u>
Do. do. do. at Bilge Keelson	<u>10</u>	<u>10</u>	Gunwale Plate on ends of <u>Awning</u> , or Spar Deck Beams, breadth and thickness	<u>5 1/2 x 8</u>	<u>5 1/2 x 8</u>
Do. height extended at the Bilges	<u>4</u>	<u>4</u>	Angle Iron on ditto	<u>4 x 4 x 9</u>	<u>4 x 4 x 9</u>
Beams, Three Decked, Spar, or Awning Decked (No. <u>5</u>) single or double Angle Iron, Plate or Tee Bulb Iron	<u>7 1/2 x 7</u>	<u>7 1/2 x 7</u>	Tie Plates (fore and aft), outside Hatchways	<u>17</u>	<u>8</u> <u>17</u> <u>8</u>
Single or double Angle Iron on Upper edge	<u>2 3/4 x 2 3/4</u>	<u>2 3/4 x 2 3/4</u>	Diagonal Tie Plates on Beams (No. of Pairs)	<u>17</u>	<u>8</u> <u>17</u> <u>8</u>
Average space	<u>4</u>	<u>4</u>	Planksheer material and scantling		
Beams, Upper or Middle Deck (No. <u>5 1/2</u>) single, or double Angle Iron, Plate or Tee Bulb Iron	<u>8 1/2 x 8</u>	<u>8 1/2 x 8</u>	Waterways do. do.		
Single, or double Angle Iron, on Upper Edge	<u>3 1/4 x 3</u>	<u>3 1/4 x 3</u>	Flat of Deck do. do.	<u>3 1/2</u>	<u>3 1/2</u>
Average space	<u>4</u>	<u>4</u>	How fastened to Beams		
Beams, Lower Deck or Orlop (No. <u>3 1/2</u>) single or double Angle Iron, Plate or Tee Bulb Iron	<u>8 1/2 x 8</u>	<u>8 1/2 x 8</u>	Stringer Plate on ends of Upper or Middle Deck Beams, breadth and thickness	<u>41</u>	<u>10</u> <u>41</u> <u>10</u>
Single or double Angle Iron on Upper Edge	<u>3 1/4 x 3</u>	<u>3 1/4 x 3</u>	Angle Irons on ditto (No. <u>2</u>)	<u>4 x 4 x 9</u>	<u>4 x 4 x 9</u>
Average space	<u>4</u>	<u>4</u>	Tie Plates, outside Hatchways	<u>13 1/2</u>	<u>10</u> <u>13 1/2</u> <u>10</u>
Keelson Centre line, single or double plate, box, or intercostal, size of Plates	<u>24 1/2 x 10</u>	<u>24 1/2 x 10</u>	Diagonal Tie Plates on Beams (No. of pairs, <u>5</u>)	<u>13 1/2</u>	<u>10</u> <u>13 1/2</u> <u>10</u>
Do. Bulb Plate to Intercostal Keelson	<u>8 1/2 x 8</u>	<u>8 1/2 x 8</u>	Waterways materials and scantling		
Do. Size of Angle Irons	<u>6 x 4</u>	<u>6 x 4</u>	Flat of Deck do. do.	<u>4</u>	<u>4</u>
Do. Side Intercostal Keelson, size of Plates	<u>9 x 9</u>	<u>9 x 9</u>	How fastened to Beams		
Do. Angle Irons on tops of Floors	<u>5 1/2 x 4</u>	<u>5 1/2 x 4</u>	Stringer Plates on ends of Lower Deck or Orlop Beams	<u>31</u>	<u>9</u> <u>31</u> <u>9</u>
Do. Bilge Keelson, Bulb Iron	<u>8 1/2 x 8</u>	<u>8 1/2 x 8</u>	Angle Irons on ditto (No. <u>2</u>)	<u>26</u>	<u>8</u> <u>26</u> <u>8</u>
Do. do. Angle Irons	<u>5 1/2 x 4</u>	<u>5 1/2 x 4</u>	Stringer or Tie Plates, outside Hatchways	<u>4 x 4 x 9</u>	<u>4 x 4 x 9</u>
Do. Side Stringers (No. <u>5</u>) size of Angle Irons	<u>5 1/2 x 4</u>	<u>5 1/2 x 4</u>	Flat of Deck		
Plating material <u>Iron</u> or, if none, in what manner compensated for.			Ceiling betwixt Decks, thickness and material	<u>2 1/2</u>	<u>2 1/2</u>
			Do. in hold do. do.	<u>2 1/2</u>	<u>2 1/2</u>
			Clamps or Spirketting		
			Main piece of Rudder, diameter at head	<u>6 1/2</u>	<u>6 1/2</u>
			Do. do. at heel	<u>3 1/2</u>	<u>3 1/2</u>
			(Can the Rudder be unshipped afloat?) <u>Yes</u>		
			Bulkheads No. <u>4</u> Thickness of <u>5/16</u>		
			Do. Height up <u>Main Deck</u>		
			Do. How secured to the sides of the ship <u>Believed to be secured</u>		
			Do. Size of Vertical Angle Irons, <u>3 x 3 x 7/8</u> and their distance apart, <u>30</u>		
			Do. Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>		

Are the various lengths of Plates and Angle Irons properly connected? Yes And are their butts properly shifted? Yes

Plates, Garboard, double Riveted to Keel, double at upper edge, with Rivets (1/2 in.) diameter, averaging (5 3/4 ins.) from centre to centre.

Do. Edges from Garboards to upper part of Bilge, worked Clencher, double Riveted; with Rivets (7/8 in.) diameter, averaging (3 3/4 ins.) from centre to centre.

Do. Butts from Keel to turn of Bilge, worked carvel with butt straps (1/16) thick, treble, double Riveted; with Rivets (7/8 in.) diameter averaging (3 3/4 ins.) from centre to centre.

Do. Edges of Sheerstrake, double or single Riveted. At upper edge single double rivet At lower edge double riveted

Do. Butts from Bilge to Planksheers, worked Carvel with Butt Straps (5/16) thick, double Riveted; with Rivets (3/4 in.) diameter, averaging (5 ins.) from centre to centre.

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? double & treble riveted

Planksheer, how secured to the plating of the sides, Explain by Sketch,

Waterway, planksheer and to the Beams, if necessary.

Beams of the various Decks, how secured to the sides? Turned down No. of Breasthooks, 5 Crutches, 5

What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.?

Manufacturer's name or trade mark, Angle bulb iron by John Mitchell & Co. Plating by Coyle & Co.

We certify that the above is a correct description of the several particulars therein given.

Builder's Signature, E. C. Mitchell & Co. Surveyor's Signature, J. D. Mitchell

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Workmanship. Are the butts of plating planed or otherwise fitted? Planed 8863 Iron
 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? Solid single pieces
 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? Very few

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 Mainmast 62 ft x 23 1/2 dia. Foremast 70 ft x 23 1/2 dia

The four Mainmasts are of iron framed of two plates in breadth. The Edges are double riveted and the butts double riveted. The plates are 7/16 and 5/16 at head, and 12 feet long.

N ^o .	Number for equipment	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.	
	24355			300	1 1/8	57.4.0.0	1 1/8	57 20				27.3.12	26.19.2.21	27.3.0	26.15.2.0
		Fore Sails,	Chain						Bowers	1	27.3.6	26.18.3.6	27.3.0	26.15.2.0	
		Fore Top Sails,	(State Machine where Tested, and name of Superintendent).							1	26.1.0	24.1.3.14	23.7.10	23.4.7.0	
		Fore Topmast Stay Sails	Hempen Stream Cable	90	11				(State Machine where Tested, and name of Superintendent).						
		Main Sails,	Hawser	90	1				Stream	1	11.2.0		11.0.0		
		Main Top Sails,	Towlines	90	7				Kedges	1	5.1.10		5.2.0		
			Warp	90	5					1	2.3.4		2.3.0		
			All of good quality.												

Her Standing and Running Rigging off the hump sufficient in size and good in quality. She has 70 Long Boats and 5 others
 The present state of the Windlass is Iron Capstan and Rudder good Pumps 5 in the hold

Engine Room Skylights.—How constructed? Iron How secured in ordinary weather? Solid shutters glass
 What arrangements are there for deadlights in such for bad weather? Solid Leak shutters shutters

Coal Bunker Openings.—How constructed? Iron plates How are lids secured? Studs How high above deck? 14 inches

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? Ports on each side

Cargo Hatchways.—How formed? Iron State size 20 x 12 and 16 x 10
 If of extraordinary size, state how framed and secured? Properly framed with Half beams.

What arrangement for shifting beams? Iron iron shifting beams in Main Hatch
 Hatches, themselves, whether strong and efficient? Yes Main Hatchways.—State size 20 x 12

Order for Special Survey No. 468 DATES of
 Date 4 June 1870 Surveys held
 Order for Ordinary Survey No. — while building
 Date — as per
 No. 241 in builder's yard. Section 18.
 1st. On the several parts of the frame, when in place, and before the plating was wrought
 2nd. On the plating during the progress of riveting
 3rd. When the beams were in and fastened, and before the decks were laid
 4th. When the ship was complete, and before the plating was finally coated or cemented
 5th. After the ship was launched and equipped

General Remarks,
 This ship has been built strictly in accordance with the Rules and the accompanying technical section, submitted and approved by the Committee.

In what manner are the surfaces preserved from oxidation? Inside Painted Outside Painted

I am of opinion this Vessel should be Classed 100 A

The amount of the Entry Fee£ 5: .. is received by me,
 Travelling Expenses (if any)£ .. : ..
 Special£ 70: 9: ..
 Certificate : ..

Committee's Minute 31st March 1871

Character assigned 100 A

[Handwritten signature: J. M. ...]
 This report is built according to the sketch of Midship Section sanctioned by the Committee and in other respects to the Rules. I concur in the opinion that she should be classed 100 A.
 J. M. ...
 31/3/71

[Vertical handwritten note on the left margin]