

# IRON SHIP

No. 1210-4 Survey held at Newcastle Date, First Survey 20<sup>th</sup> Aug 1875 Last Survey 9<sup>th</sup> March 1876

On the Iron Ship "Spartan" Master John Cooper

**AGE under Tonnage Deck** 1514.56  
**to of Third, Spar, or Awning Deck** 20.74  
**to of Poop, or Raised Quarter Deck** 1535.30  
**to of Houses on Deck** 56.94  
**to of Forecastle** 1478.36  
**less Tonnage** 491.30  
**less Open Space** 984.06  
**less Engine Room**  
**less Tonnage cut on Beam**

**ONE, OR TWO DECKED, THREE DECKED VESSEL.**  
**SPAR, OR AWNING DECKED VESSEL.**  
**HALF BREADTH** (moulded) 16.2  
**DEPTH** from upper part of Keel to top of Upper Deck Beams 25.9  
**GIRTH** of Half Midship Frame (as per Rule) 37.5  
**1st NUMBER** 79.33  
**1st NUMBER, if a THREE-DECKED VESSEL** 72.33  
**LENGTH** 258.5  
**2nd NUMBER** 186.97  
**PROPORTIONS**—Breadths to Length 7.9  
**Depths to Length**—Upper Deck to Keel 10  
**Main Deck ditto** 13.7

**Built at** Newcastle  
**When built** 1876 **Launched** 10<sup>th</sup> Jan  
**By whom built** C. Mitchell & Co  
**Owners** Edw<sup>d</sup> Shotton  
**Port belonging to** London  
**Destined Voyage** Bombay  
**If Surveyed while Building, Afloat, or in Dry Dock.** While building

**BREADTH**—Moulded... 32.6  
**DEPTH** top of Floors to Upper Deck Beams 23  
**Do. do. Main Deck Beams** 16  
**Power of Engines** 160  
**N<sup>o</sup>. of Decks with flat laid** Two  
**N<sup>o</sup>. of Tiers of Beams** Three

**of Ship per Register, length, 261 breadth, 32.6 depth, 24**

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
th and thickness	9 x 2 1/2	9 x 2 1/2	Flat Keel Plates, breadth and thickness	36	11
Building and thickness	8 1/2 x 2 1/2	8 1/2 x 2 1/2	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	36	11
POST for Rudder do. do.	8 1/2 x 5	8 1/2 x 5	of doubling at Bilge, or increased thickness, and length applied	10	10
for Propeller	8 1/2 x 5	8 1/2 x 5	fm up. part of Bilge to l. edge of Sh'rstrake	10	10
of Frames from moulding edge to g edge, all fore and aft	24	24	Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	40	12
Angle Iron, for 1/2 length amidships	4 1/2 x 3	4 1/2 x 3	Up. or Spar Dk Sh'rstrake, brdth & thickness	40	12
or 1/2 at each end	4 1/2 x 3	4 1/2 x 3	Butt Straps to outside plating, breadth & thickness	10 1/2	10 1/2
VERSED FRAMES, Angle Iron	3 x 3	3 x 3	Lengths of Plating	10 feet	10 feet
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	22 1/2 x 9	22 1/2 x 9	Shifts of Plating, and Stringers	48	48
thickness at the ends of vessel	11 1/2	11 1/2	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	54	9
length at 3/4 the half-bdth. as per Rule	45	45	Angle Iron on ditto	4 x 4 x 9	4 x 4 x 9
eight extended at the Bilges	6 1/2 x 6	6 1/2 x 6	Tie Plates fore and aft, outside Hatchways	13	9
Upper, Spar, or Awning Deck	2 1/2 x 2 1/2	2 1/2 x 2 1/2	Diagonal Tie Plates on Beams No. of Pairs		
d'ble Ang. Iron, Plate or Tee Bulb Iron	48	48	Planksheer material and scantling		
double Angle Iron on Upper edge	7 1/2 x 7	7 1/2 x 7	Waterways do. do.	Iron Cutter	
average space	3 x 3	3 x 3	Flat of Upper Deck do. do.	Yellow Pine	
EAMS, Main, or Middle Deck	3 x 3	3 x 3	How fastened to Beams	Screw bolts and nuts	
single or d'ble Ang. Iron, Plate or Tee Bulb Iron	48	48	Stringer Plate on ends of Main or Middle Deck	47	10
single, or double Angle Iron, on Upper Edge	8 x 8	8 x 8	Beams, breadth and thickness	37	10
Average space	5 x 5	5 x 5	Is the Stringer Plate attached to the outside plating?	Yes	
S, Lower Deck, Hold, or Orlop	17 x 12	17 x 12	Angle Irons on ditto, No. two	4 x 4 x 9	4 x 4 x 9
d'ble Ang. Iron, Plate or Tee Bulb Iron	10 3/4 x 12	10 3/4 x 12	Tie Plates, outside Hatchways		
double Angle Iron on Upper Edge	5 x 4	5 x 4	Diagonal Tie Plates on Beams, No. of pairs		
average space	20 x 8	20 x 8	Waterways materials and scantlings	6 in. twist frames	
ONS Centre line, single or double plate, box, or Interv. tal. Plates	5 x 4	5 x 4	Flat of Middle Deck do. do.	Iron	
Rider Plate	3 x 3	3 x 3	How fastened to Beams	Plated	
Bulb Plate to Interv. tal Keelson	5 x 4	5 x 4	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	33	9
Angle Irons	5 x 4	5 x 4	Is the Stringer Plate attached to the outside plating?	Yes	
Double Angle Iron Side Keelson	3 x 3	3 x 3	Angle Irons on ditto, No. two	4 x 4 x 9	4 x 4 x 9
Side Intercoastal Plate	7 1/2 x 7	7 1/2 x 7	Stringer or Tie Plates, outside Hatchways		
do. Angle Irons	5 x 4	5 x 4	Flat of Lower Deck		
Attached to outside plating with angle iron	5 x 4	5 x 4	Ceiling betwixt Decks, thickness and material in hold do. do.	2 1/2 B. Pine	2 1/2
BILGE Angle Irons	3 x 3	3 x 3	Main piece of Rudder, diameter at head do. at heel	6 1/2 3 1/2	6 1/2 3 1/2
do. Bulb Iron	5 x 4	5 x 4	Can the Rudder be unshipped afloat?	Yes	
do. Intercoastal plates riveted to plating for length	3 x 3	3 x 3	Bulkheads No. 5 Thickness of	6	6
BILGE STRINGER Angle Irons	5 x 4	5 x 4	Height up to middle of Collision bulkhead to upper deck		
Intercoastal plates riveted to plating for half length	3 x 3	3 x 3	How secured to sides of ship	Double frames	
STRINGER Angle Irons			Size of Vertical Angle Irons 3 x 3 x 7/16 and distance apart	30 ins.	

**ms, material. Knight-heads. Hawse Timbers.** Iron  
**lass** Emmerson & Pall Bitt Walker's Patent.  
**FRAMES** extend in one length from Keel to Gunwale Riveted through plates with 7/8 in. Rivets, about 1 apart.  
**EVERSED ANGLE IRONS** on floors and frames extend from across middle line to M. D. S. A. S. and to Gunwale alternately  
**ELLSONS.** 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 1/2 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 4 ins. from centre to centre.  
**Butts from Keel to turn of Bilge,** worked carvel, double riveted; with rivets 7/8 in. diameter averaging 5 3/4 ins. from centre to centre.  
**Butts of Three Strakes** at Bilge for half length, treble riveted with Butt Straps 7/8 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 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 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** 5 1/4 **Breadth of laps of plating in single riveting** 5  
**tt Straps of Keelsons, Stringer and Tie Plates,** treble, double or single Riveted? Treble and double riveted  
**Waterway, how secured to Beams** Iron Cutter (Explain by Sketch, if necessary.)  
**ams of the various Decks, how secured to the sides?** Welded knees riveted to frames. No. of Breasthooks, Five Crutches, Four  
**What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.?** Ordinary Slip Iron  
**Manufacturer's name or trade mark,** Robt. Mather & Co. Bell Ridley & Bell. Bell & Taylor. J. & W. Mather & Co.  
**The above is a correct description.**  
**Builder's Signature,** For J. Hutchins & Co. W. Johnson **Surveyor's Signature,** J. H. Cooke. Geo. Cooper  
**Surveyor to Lloyd's Register of British and Foreign Shipping.**

IRON 466-0044



**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.*

State also Length and Diameter of Lower Masts and Bowsprit

Schooner rigged 16178 Irons

NUMBER for EQUIPMENT		20506		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'tht req'd per Rule.	Test req'd per Rule.
No.	SAILS.	CABLES, &c.	270	1 <sup>7</sup> / <sub>8</sub>	51 <sup>1</sup> / <sub>2</sub>	270-1 <sup>7</sup> / <sub>8</sub>	51 <sup>1</sup> / <sub>2</sub>		Bowers	1	28-1-5	27-2-21	27-3-0	26-1 <sup>1</sup> / <sub>2</sub>
		Chain		13.5	41 <sup>1</sup> / <sub>2</sub>		71 <sup>1</sup> / <sub>2</sub>			1	27-2-12	26-16-3-14	27-3-0	
Single	Fore Sails,	(State Machine where tested, & name of Suprmtndt.)	L. P. H. L.			W. R. Burrell Capt.				1	24-0-14	23-19-2-21	23-20	
Out	Fore Top Sails,													
	Fore Topmast													
	Stay Sails	Storm Cbl	90	1 <sup>7</sup> / <sub>8</sub>			90-1 <sup>7</sup> / <sub>8</sub>							
		Hawser ...	90	9 <sup>1</sup> / <sub>2</sub>			90-10 <sup>1</sup> / <sub>2</sub>							
	Main Sails,	Towlines ...	90	8			90-6 <sup>1</sup> / <sub>2</sub>		Stream	1	11-0-21		11-0-0	
	Main Top Sails,	Warp ...	90							1	5-2-4		5-2-0	
and	Spine present	quality	90	4 & then					Kedges	1	2-3-4		2-3-0	

The Windlass is lnw Capstan lnw and Rudder lnw Pumps 1 1/2 Pa Compl.

What arrangements for deadlights in bad weather? *4 ft. arms on - from top of Solid chuttes & Bullseye*

**Coal Bunker Openings.**—How constructed? *Cast iron crammie* How are lids secured? *Staples* Height above deck? *10 ft.*

**Scuppers, &c.**—What arrangements for clearing upper deck of water, in case of shipping a sea? *Pumps & scuppers*

**Cargo Hatchways.**—How formed? Gun-framed-plates & angles

State size **Main Hatch** 24' x 12' **Forehatch** 12' x 4' **Quarterhatch** 18' x 12'

If of extraordinary size, state how framed and secured? Not extraordinary size

What arrangement for shifting beams? Two iron shifting beam - wood frame & after

**Hatches,** If strong and efficient? Yes

Order for Special Survey No. <u>1095</u>	DATES of Surveys held while building as per Section 18.	1st. On the several parts of the frame, when in place, and before the plating was wrought	<u>Built under Special Survey.</u>
Date <u>20 Aug 1875</u>		2nd. On the plating during the process of riveting	<u>1875 Aug 20. 26. 30. Sep 1. 7. 12. 16. 22. 24. 30. Oct 5. 11. 18. 25. 31. Nov 1. 8. 15. 22. 29. Dec 6. 13. 20. 27.</u>
Order for Ordinary Survey No. <u>—</u>		3rd. When the beams were in and fastened, and before the decks were laid....	<u>5. 8. 10. 22. 28. Nov 2. 4. 8. 12. 15. 20. 23. 26. Dec 1. 8.</u>
Date <u>—</u>		4th. When the ship was complete, and before the plating was finally coated or cemented..	<u>22. 29. 31. 1876 Jan 3. 7. 8. 10. 14. 22. 27. Feb 1. 8. 15. 22. 29. Mar 1. 8. 15. 22. 29. Apr 5. 12. 19. 26. May 3. 10. 17. 24. Jun 7. 14. 21. 28. Jul 5. 12. 19. 26. Aug 2. 9. 16. 23. 30. Sep 6. 13. 20. 27. Oct 4. 11. 18. 25. 31. Nov 7. 14. 21. 28. Dec 5. 12. 19. 26. 31.</u>
No. <u>325</u> in builder's yard.		5th. After the ship was launched and equipped	<u>20. March 9.</u>

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

This is a 3 decked vessel - similar to the "Athenian" S.S. Rep. No. 13058 - built in accordance with the approved Midland attached to that Report -

She has a complete iron middle deck, & the upper deck beams are plated over in way of main hatchway & the tie plates at after hatchway are increased in width in accordance with the Rules.

She is fitted with Water Ballast arrangement in the fore hold for a length of 36 ft. & abaft the Engine Space for 70 ft. Tank top  $\frac{5}{16}$  - Girders  $\frac{5}{16}$  - Flanged plate  $\frac{7}{16}$  - These tanks have been tested & found satisfactory.

The Material & workmanship are satisfactory.

*State if one, two, or three, decked vessel, or if spar, or awning decked; and the lengths of poop, forecastle, or raised quarter deck, and the length of double, or part double bottom.*

How are the surfaces preserved from oxidation? Inside Cement & Paint. Outside Paint Monopole

I am of opinion this Vessel should be Classed 100 A

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

Special *paid* £ 61:19:0 8 April 1876

(Travelling Expenses, if any, £           ).

## Committee's Minute

*Character assigned*

J. W. double bottom 2 Dks  
 106 ft 3 Trs Buns

Double bottom - 2 Dks  
1st 1" - 30 of beam

This vessel appears  
eligible to be classed  
as recommended at  
100 £. 1. 11/12

157  
4/26