

IRON SHIP

16178 Rev 10/4/76

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

On the Iron Ship "Spartan" Master John Cooper

Tonnage under Deck 1514.56
 Ditto of Third, Spar, or Awning Decks }
 Ditto of Poop, or Raised Quarter Deck }
 Ditto of Houses on Deck } 20.44
 Ditto of Forecastle }
 Gross Tonnage 1535.30
 Less Open Space 56.94
 Less Engine Room 1478.36
 Register Tonnage 984.06
 Less cut on Beam }

ONE, OR TWO DECKED, THREE DECKED VESSEL.
 SPAR, OR AWNING DECKED VESSEL.
 HALF BREADTH (moulded) 16.2 Feet.
 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 (educt 7 feet)
 LENGTH 258.5
 2nd NUMBER 18697
 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 10th Jan
 By whom built C. Mitchell & Co
 Owners Edw^d Shotton
 Port belonging to London
 Destined Voyage Bombay
 If Surveyed while Building, Afloat, or in Dry Dock. While building

PLANS BASE

Breadth—Moulded... 32.6 Feet. 6 Inches.
 DEPTH top of Floors to Upper Deck Beams 23 Feet. 10 1/2 Inches.
 Do. do. Main Deck Beams 16 Feet. 10 1/2 Inches.
 Power of Engines 160 Horse.
 N^o. of Decks with flat laid Two
 N^o. of Tiers of Beams Three

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
Flat Keel Plates, breadth and thickness			PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied	36	11	36	11	
Thickness and thickness	9 x 2 1/2	9 x 2 1/2	fm up. part of Bilge to Ir. edge of Sh'rstrake					
Building and thickness	8 1/2 x 2 1/2	8 1/2 x 2 1/2	Main Sheerstrake, breadth and thickness of doubling at Sh'rstrake, & length applied from Mn. to Upr. or Spar Dk. Sh'rstrake.					
POST for Rudder do. do.	8 1/2 x 5	8 1/2 x 5	Up. or Spar Dk Sh'rstrake, brdth & thickness	40	12	40	12	
for Propeller	8 1/2 x 5	24	Butt Straps to outside plating, breadth & thickness	2 1/2	10 1/2	9 1/2	10 1/2	
of Frames from moulding edge to g edge, all fore and aft	24	(Class 100A)	Lengths of Plating	10 feet	10 feet			
Angle Iron, for 3/4 length amidships	4 1/2 x 3	4 1/2 x 3	Shifts of Plating, and Stringers	48	48			
or 1/2 at each end	4 1/2 x 3	4 1/2 x 3	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	54	9	54	9	
REVERSED FRAMES, Angle Iron	3 x 3	3 x 3	Angle Iron on ditto	4 x 4 x 9	4 x 4 x 9			
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	22 1/2 x 9	22 1/2 x 9	Tie Plates fore and aft, outside Hatchways	13	9	13	9	
thickness at the ends of vessel			Diagonal Tie Plates on Beams No. of Pairs,					
depth at 3/4 the half-bdth. as per Rule	11 1/2	11 1/2	Planksheer material and scantling					
eight extended at the Bilges	45	45	Waterways do. do.					Iron Cutter
Upper, Spar, or Awning Deck	6 1/2 x 6	6 1/2 x 6	Flat of Upper Deck do. do.	4	4			Yellow Pine
double Ang. Iron, Plate or Tee Bulb Iron	2 1/2 x 2 1/2	2 1/2 x 2 1/2	How fastened to Beams					Screw bolts and nuts
average space	48	48	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	27	10	37	10	
DECK BEAMS, Main, or Middle Deck	7 1/2 x 7	7 1/2 x 7	Is the Stringer Plate attached to the outside plating?	Yes				
single or double Ang. Iron, Plate or Tee Bulb Iron	3 x 3	3 x 3	Angle Irons on ditto, No. two	4 x 4 x 9	4 x 4 x 9			
single, or double Angle Iron, on Upper Edge	3 x 3	3 x 3	Tie Plates, outside Hatchways					
average space	48	48	Diagonal Tie Plates on Beams, No. of pairs					
DECK BEAMS, Lower Deck, Hold, or Orlop	8 x 8	8 x 8	Waterways materials and scantlings					Best twist frames
single or double Ang. Iron, Plate or Tee Bulb Iron	3 x 3	3 x 3	Flat of Middle Deck do. do.	6	6			
average space	5-6	12 frame spaces	How fastened to Beams					Plated
PLATES Centre line, single or double plate, box, or Intercostal, Plates	17 x 12	17 x 12	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	33	9	33	9	
Rider Plate	10 3/4 x 12	10 3/4 x 12	Is the Stringer Plate attached to the outside plating?	Yes				
Bulb Plate to Intercostal Keelson	5 x 4	5 x 4	Angle Irons on ditto, No. two	4 x 4 x 9	4 x 4 x 9			
Angle Irons	5 x 4	5 x 4	Stringer or Tie Plates, outside Hatchways					
Double Angle Iron Side Keelson	20 x 8	20 x 8	Flat of Lower Deck					
Side Intercostal Plate	5 x 4	5 x 4	Ceiling betwixt Decks, thickness and material in hold do. do.	2 1/2	13 Pine	2 1/2		
do. Angle Irons	5 x 4	5 x 4	Main piece of Rudder, diameter at head do. at heel	6 1/2	6 1/2	3 1/2	3 1/2	
Attached to outside plating with angle iron	3 x 3	3 x 3	Can the Rudder be unshipped afloat?	Yes				
BILGE Angle Irons	5 x 4	5 x 4	Bulkheads No. 5 Thickness of		6		6	
do. Bulb Iron	7 1/2 x 7	7 1/2 x 7	Height up to Middle Collision bulkhead to upper deck					
do. Intercostal plates riveted to plating for length	3 x 3	3 x 3	How secured to sides of ship					Double frames
BILGE STRINGER Angle Irons	5 x 4	5 x 4	Size of Vertical Angle Irons	3 x 3 x 7/16				and distance apart 30 ins.
Intercostal plates riveted to plating for half length	3 x 3	3 x 3	Are the outside Plates doubled two spaces of Frames in length?	Yes				
STRINGER Angle Irons								

Frames extend in one length from Keel to Gunwale Riveted through plates with 7/8 in. Rivets, about 7 apart.
 REVERSED ANGLE IRONS on floors and frames extend from across middle line to M. D. S. A. S. and to Gunwale alternately
 KEELSONS. 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
 Butt 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.)
 Beams 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, Hopkin's Golden Hill Felling Co. Bell Ridley & Bell. Bell & Taylor. N^o 1 Portland Malleable Co.
 The above is a correct description.
 Builder's Signature, For J. Mitchell & Co Surveyor's Signature, J. H. Cooke
W. Johnson 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

Masts, Bowsprit, Yards, &c., are 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

Schooner rigged 16178 Irons

NUMBER for EQUIPMENT <u>20506</u>		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate	Wght req'd per Rule.	Test req'd per Rule.	
N ^o .	SAILS.	CABLES, &c.	270	1 1/2	5 1/2	270-1 1/2	5 1/2	Bowers	1	28-1-5	27-2-21	27-3-0	26 1/2
			Chain	13.5	4 1/2	7 1/2							
	Fore Sails,	L. P. H. L. W. R. Burrell Capt.	12/11/75										
	Fore Top Sails,												
	Fore Topmast Stay Sails	90	1 1/2		90-1 1/2								
	Main Sails,	90	9 1/2		90-10 1/2								
	Main Top Sails,	90	4 fathoms		90-6 1/2								
	and Spinnaker	90											
	Standing and Running Rigging	wire rope		sufficient in size and good in quality.		She has		one	Life Boat	and three other			
	The Windlass is	good	Capstan	good	Rudder	good	Pumps	1 1/2	2 1/2	Compl.			
	Engine Room Skylights.	How constructed? <u>Flush Board & iron Casement</u>		How secured in ordinary weather? <u>Nut & screw bolts</u>									
	What arrangements for deadlights in bad weather?	<u>Solid shutters & Bullseyes</u>											
	Coal Bunker Openings.	How constructed? <u>Cool iron Craning</u>		How are lids secured? <u>Shrap</u>		Height above deck? <u>10 in.</u>							
	Scuppers, &c.	What arrangements for clearing upper deck of water, in case of shipping a sea?		<u>Ports & scuppers</u>									
	Cargo Hatchways.	How formed? <u>Iron framed - plates & angles</u>											
	State size Main Hatch	<u>24' x 12'</u>		Forehatch <u>12' x 4'</u>		Quarterhatch <u>18' x 12'</u>							
	If of extraordinary size, state how framed and secured?	<u>Not extraordinary size</u>											
	What arrangement for shifting beams?	<u>Two iron shifting beams - wood frame & rollers</u>											
	Hatches, if strong and efficient?	<u>Yes</u>											

Order for Special Survey No. 1093 Date 28 Aug 1875

Order for Ordinary Survey No. 225 in builder's yard.

- 1st. On the several parts of the frame, when in place, and before the plating was wrought
- 2nd. On the plating during the process 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 (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 Midship 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 3/4 - Borden 3/4 - Flanged plate 7/8 - 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, forecabin, 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 & Hemp.

I am of opinion this Vessel should be Classed + 100A1

The amount of the Entry Fee ... is received by me, J. Young Special Certificate ... 8 April 1876

Committee's Minute 11 April 1876

Character assigned 100A1

Logbook double bottom 2 Dks Iron Deck 106 ft 3 Truss Beams

Vertical text on the left margin: "Name of vessel 262, tonnage 262, name of the ship"

