

# IRON SHIP.

Rec 3/12/74

No. 3379 Survey held at West Hartlepool Date, First Survey 20<sup>th</sup> April Last Survey 24<sup>th</sup> Nov 1874

On the Steamer "Minerva" Yard Number 142 Master Blacklaw

TONNAGE under Tonnage Deck 1557.09  
 Ditto of Third, Spar, or Awning Deck.  
 Ditto of Poop, or Raised Or. Dk.  
 Ditto of Houses on Deck.  
 Ditto of Forecastle  
 Gross Tonnage 1500.55  
 Less Crew Space 54.04  
 Less Engine Room 500.34  
 Register Tonnage 1025.37  
 as cut on Beam

ONE, OR TWO DECKED, THREE DECKED VESSEL.  
 SPAR, OR AWNING-DECKED VESSEL.  
 HALF BREADTH (moulded) 16-5  
 DEPTH from upper part of Keel to top of Upper Deck Beams 25-0  
 GIRTH of Half Midship Frame (as per Rule) 37-9  
 1st NUMBER 79-10  
 1st NUMBER, if a THREE-DECKED VESSEL deduct 7 feet 72-10  
 LENGTH 256-  
 2nd NUMBER 10645  
 PROPORTIONS—Breadths to Length under 8  
 Depths to Length—Upper Deck to Keel under 10  
 Main Deck ditto under 14

Built at West Hartlepool  
 When built 1874 Launched 26<sup>th</sup> Sept.  
 By whom built W. Gray & Co  
 Owners W. H. Wise & Son  
 Port belonging to West Hartlepool  
 Destined Voyage India  
 If Surveyed while Building, Afloat, or in Dry Dock.

LENGTH in deck as 256 - Breadth Moulded 32 - DEPTH top of Floors to Upper Deck Beams 24 - Do. do. Main Deck Beams 17 - Power of Engines 140 Horse. No. of Decks with flat laid Two No. of Tiers of Beams Three

Dimensions of Ship per Register, length, 256 - breadth, 32 - depth, 23 - 0

	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
STEM, moulding and thickness	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
STERN-POST for Rudder do. do. for Propeller	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
FRAMES, Angle Iron, for 1/2 length amidships	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Do. for 1/4 at each end	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
REVERSED FRAMES, Angle Iron	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
thickness at the ends of vessel	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
depth at 1/2 the half-bdth. as per Rule	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
height extended at the Bilges	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
BEAMS, Upper, Spar, or Awning Deck Single or double Angle Iron, Plate or Tee Bulb Iron	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Single or double Angle Iron on Upper edge	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Average space	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
BEAMS, Main or Middle Deck Single or double Angle Iron, Plate or Tee Bulb Iron	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Single or double Angle Iron, on Upper Edge	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Average space	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
BEAMS, Lower Deck, Hold or Orlop Single or double Angle Iron, Plate or Tee Bulb Iron	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Single or double Angle Iron on Upper Edge	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Average space	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Rider Plate	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Bulb Plate to Intercoastal Keelson	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Angle Irons	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Double Angle Iron Side Keelson	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Side Intercoastal Plate	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
do. Angle Irons	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Attached to outside plating with angle iron	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
BILGE Angle Irons	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
do. Bulb Iron	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
do. Intercoastal plates riveted to plating for length	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
BILGE STRINGER Angle Irons	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
Intercoastal plates riveted to plating for 1/2 length.	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2
SIDE STRINGER Angle Irons	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2	24	2 1/2

Transoms, material. Knight-heads. Hawse Timbers. Plates  
 Windlass Emerson & Walker Pall Bitt

The FRAMES extend in one length from Keel to gunwale Riveted through plates with 3/4 in. Rivets, about 6 in. apart.  
 The REVERSED ANGLE IRONS on floors and frames extend across middle line to above main deck stringer 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 in. diameter, averaging 5 ins. from centre to centre.

Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 3/4 in. diameter, averaging 3 3/4 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/2 ins. from centre to centre.

Butts of Strakes at Bilge for half length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 3/4 in. diameter, averaging 3 3/4 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/2 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 for 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 4 3/4 Breadth of laps of plating in single riveting 2 3/4

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double or Treble

Waterway, how secured to Beams (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? Ends turned & pieces welded No. of Breasthooks 0 Crutches, Three

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

Manufacturer's name or trade mark, S. M. & Co. & Co.

The above is a correct description.

Builder's Signature, William Gray & Co. Surveyor's Signature, J. P. Lloyd's Register

Foundation

IRON 459-0319



Workmanship. Are the butts of plating planed or otherwise fitted?

Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies?

Are the fillings between the ribs and plates solid single pieces?

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

Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces?

Do any rivets break into or through the seams or butts of the plating?

Masts, Bowsprit, Yards, &c., are of Iron & Mahogany 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 Main Mast 70 ft. Dia. 22 1/2 in. Fore Mast 45 ft. Dia. 22 1/2 in.

Made with three plates in the round, Double riveted at edges & Treble at butts. 3/4 inch spaced 3 1/2 ft. Plating 6/16 at wedging tapered to 5/16 at head & heel. Three angle irons fitted inside at wedging 1 1/2 ft. in length 4 1/2 x 3 1/2 x 8/16

NUMBER for EQUIPMENT <u>20436</u>		Fathoms.	Inches.	Test per Certificate.	Lngh. & Size req'd pr Rule	Test req'd per Rule.	ANCHORS, &c.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
one sheet of good steel and	SAILS.						Bowers	3	27-2-14	26-16-5-14	27-3/4	26-18-0-0
	Fore Sails,	270	1 1/4	5 1/4	70%	5 1/4	(State Machine where Tested, Date, and name of Superintendent.)		27-1-14	26-13-0-14	27-3/4	26-18-0-0
	Fore Top Sails,	145	1 1/4	5 1/4	70%	5 1/4			26-2-5	26-0-1-21	27-3/4	26-18-0-0
	Fore Topmast Stay Sails	145	1 1/4	5 1/4	70%	5 1/4			26-2-5	26-0-1-21	27-3/4	26-18-0-0
	Main Sails,	190	1 1/4	5 1/4	70%	5 1/4			26-2-5	26-0-1-21	27-3/4	26-18-0-0
	Main Top Sails,	190	1 1/4	5 1/4	70%	5 1/4			26-2-5	26-0-1-21	27-3/4	26-18-0-0
	CABLES, &c.						Stream	1	12-0-0		11-0-0	
	Chain	270	1 1/4	5 1/4	70%	5 1/4	Kedges	2	15-1-14		15-2-0	
	(State Machine where Tested, Date, & name of Superintendent.)								3-1-0		3-3-0	
	Hawser	60	1 1/4	5 1/4	70%	5 1/4						
	Towlines	190	1 1/4	5 1/4	70%	5 1/4						
	Warp	190	1 1/4	5 1/4	70%	5 1/4						
	quality	190	1 1/4	5 1/4	70%	5 1/4						

Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has Five Long Boats and good

The Windlass is good Capstan 2 or good and Rudder good Pumps 3 of metal 4 inch

Engine Room Skylights.—How constructed? in teak 14 casings 4 ft. high How secured in ordinary weather? Bullseyes

What arrangements for deadlights in bad weather? Bullseyes

Coal Bunker Openings.—How constructed? Iron casings How are lids secured? With flaps Height above deck? 12 inches

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

Cargo Hatchways.—How formed? 7/16 Plate

State size Main Hatch 23 ft 4 in x 11 ft 6 in boning 36 in Fore hatch 12 ft 0 in x 10 ft 6 in boning 36 in Quarter hatch 19 ft 10 in x 11 ft 6 in boning 36 in

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams? 7/16 Plate in centre the whole depth of bonings, Double angles on top edges, Two bullseyes

Hatches, If strong and efficient? Strong & efficient

Order for Special Survey No. <u>484</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>Special Survey 1874 April 20-22-27-29 May 1-4 8-12-13-18-21</u>
Date <u>21<sup>st</sup> April 1874</u>		2nd. On the plating during the process of riveting	<u>June 1-8-10-17-22-26-30 July 6-9-13-14-16-21-24-29-30 Aug 3-6</u>
Order for Ordinary Survey No.		3rd. When the beams were in and fastened, and before the decks were laid....	<u>21-26-31 Sept 2-4-11-29 Oct 7-5-13-14 Nov 4-6-10-16-17-20</u>
Date		4th. When the ship was complete, and before the plating was finally coated or cemented..	
No. <u>142</u> in builder's yard.		5th. After the ship was launched and equipped	

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

Is fitted with water ballast tanks in length 180 ft. Side plates 7/16. Angles on so. 3 1/2 x 3 1/2 x 7/16. Web plates 6/16, angles on so. 2 x 3 x 6/16 top plating 7/16

William Gray & Co

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.

How are the surfaces preserved from oxidation? Inside Paint cemented with Portland Cement Outside Other parts with paint

I am of opinion this Vessel should be Classed 90 A1

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

Special ... £ 60 : 6 : 6 - 30 Nov 1874

Certificate ... : : :

(Travelling Expenses)

(if any) £

Committee's Minute 4<sup>th</sup> December 1874

Character assigned 90 A1

2 Decks  
3 Decks of Beams  
M.C.

Lloyd's Register  
Foundation  
31<sup>st</sup> Dec 1874