

IRON OR STEEL SHIP.

Date of writing Report 8<sup>th</sup> August 1889 Port of Sunderland

No. 15163 Survey held at Sunderland

Date, First Survey 23<sup>rd</sup> January

Last Survey 7<sup>th</sup> August

1889

Vessel "Mafalgar"

(Yard No. 96) Rig Schooner

Master William Holman

Tonnage under Deck 1140.82  
between Tonnage Dk. and 3rd, 4th, Spar or Tonnage Dk.  
of Poop  
of Raised Qr.  
Dk. or Break  
of Bridge House  
of Houses on Deck  
of excess of Hatchways  
of Forecastle  
Gross Tonnage 1589.33  
Crew Space 51.32  
Engine Room  
Gross Tonnage  
as out on Beam 1029.42

ONE, OR TWO DECKED, THREE DECKED VESSEL,  
SPAR, OR AWNING DECKED VESSEL.

Half Breadth (moulded) 14.92  
Depth from upper part of Keel to top of Upper Deck Beams 20.12  
Girth of Half Midship Frame (as per Rule) 34.79  
1st Number 42.83  
2nd Number 143.69  
Length 238.5  
Proportions Breadth to Length 6.6  
Depth to Length Upper Deck to Keel 11.8  
Main Deck ditto

Year of appointment  
Built at Sunderland  
When built 1889 Launched 13.6.89  
By whom built John Blumer & Co  
Owners Pinkney Bros & Co  
Managers  
Residence Bishopgate Street, London  
Port belonging to Sunderland  
Destined Voyage Putina  
If Surveyed while Building, Afloat, or in Dry Dock.  
While Building and Afloat.

LENGTH on deck as per Rule 238 6 BREADTH Moulded 35 10 DEPTH top of Deck Beams to Upper Do. do. Main Deck Beams 14 2 Power of Engines 180 N° of Decks with flat laid One N° of Tiers of Beams 14

	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	8 1/2 x 2 1/2	8 1/2 x 2 1/2	PLATES in Garboard Strakes, br'dth & thickness	36	15	36	15				
STEM, moulding and thickness	8 1/2 x 5	8 1/2 x 5	" From Garboard to upper part of Bilges	10	10	10	10				
STERN-POST for Rudder do. do.	8 1/2 x 5	8 1/2 x 5	" Of d'bling at Bilge, or increased thickness, and length applied	10	10	10	10				
" " for Propeller	24	24	" From up. prt of Bilge to l.r. edge of Sh'rstrake	40	12	40	12				
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	" Main Sheerstrake, breadth and thickness	8	8	8	8				
FRAMES, Angle Iron, for 1/2 length amidships	4 1/2 x 3	4 1/2 x 3	" Of d'bling at Sh'stk & lng. applied	36	10	36	10				
Do. for 1/4 at each end	4 1/2 x 3	4 1/2 x 3	" From M'n. to Upr. of Spar Dk. Sh'rstrake	2 1/2 x 1 1/2	2 1/2 x 1 1/2	2 1/2 x 1 1/2	2 1/2 x 1 1/2				
REVERSED FRAMES, Angle Iron	3 x 3	3 x 3	" Upr. of Spar Dk Sh'rstrake, br'dth & thckn'ss	2 1/2 x 1 1/2	2 1/2 x 1 1/2	2 1/2 x 1 1/2	2 1/2 x 1 1/2				
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	3 1/2 x 1/2	3 1/2 x 1/2	Butt Straps to outside plating, breadth & thickness	1 1/2 x 1/2	1 1/2 x 1/2	1 1/2 x 1/2	1 1/2 x 1/2				
" thickness at the ends of vessel	3 1/2 x 1/2	3 1/2 x 1/2	Lengths of Plating	3 1/2 x 1/2	3 1/2 x 1/2	3 1/2 x 1/2	3 1/2 x 1/2				
" depth at 1/4 the half-bdth. as per Rule	3 1/2 x 1/2	3 1/2 x 1/2	Shifts of Plating, and Stringers	3 1/2 x 1/2	3 1/2 x 1/2	3 1/2 x 1/2	3 1/2 x 1/2				
" height extended at the Bilges	3 1/2 x 1/2	3 1/2 x 1/2	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	4 x 4	9	4 x 4	9				
BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	4 x 4	8	Angle Iron on ditto	4 x 4	9	4 x 4	9				
Single or double Angle Iron on Upper edge	4 x 4	8	Tie Plates fore and aft, outside Hatchways	4 x 4	9	4 x 4	9				
Average space	4 x 4	8	Diagonal Tie Plates on Beams No. of Pairs	4 x 4	9	4 x 4	9				
BEAMS, Main, or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	4 x 4	8	Flat of Up., Spar, or Awning Dk. Iron plates	4 x 4	9	4 x 4	9				
Single or double Angle Iron on Upper Edge	4 x 4	8	How fastened to Beams	4 x 4	9	4 x 4	9				
Average space	4 x 4	8	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	4 x 4	9	4 x 4	9				
BEAMS, Hold, or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	4 x 4	8	Is the Stringer Plate attached to the outside plating?	4 x 4	9	4 x 4	9				
Single or double Angle Iron on Upper Edge	4 x 4	8	Angle Irons on ditto, No.	4 x 4	9	4 x 4	9				
Average space	4 x 4	8	Tie Plates, outside Hatchways	4 x 4	9	4 x 4	9				
KEELSONS Centre line, single or double plate, box, or Intercoastal Plates	4 x 4	8	Diagonal Tie Plates on Beams, No. of pairs	4 x 4	9	4 x 4	9				
Rider Plate	4 x 4	8	Flat of Middle Deck do.	4 x 4	9	4 x 4	9				
Bulb Plate to Intercoastal Keelson	4 x 4	8	How fastened to Beams	4 x 4	9	4 x 4	9				
Angles Irons	4 x 4	8	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	4 x 4	9	4 x 4	9				
Double Angle Iron Side Keelson	4 x 4	8	Is the Stringer Plates attached to the outside plating?	4 x 4	9	4 x 4	9				
Side Intercoastal Plate	4 x 4	8	Angle Irons on ditto, No.	4 x 4	9	4 x 4	9				
do. Angle Irons	4 x 4	8	Stringer or Tie Plates, outside Hatchways	4 x 4	9	4 x 4	9				
Attached to outside plating with angle iron	4 x 4	8	Flat of Lower Deck	4 x 4	9	4 x 4	9				
BILGE Angle Irons	4 x 4	8	Ceiling betwixt Decks, thickness and material	4 x 4	9	4 x 4	9				
do. Bulb Iron	4 x 4	8	" in hold do. do.	4 x 4	9	4 x 4	9				
do. Intercoastal plates riveted to plating for length	4 x 4	8	Main piece of Rudder, diameter at head	4 x 4	9	4 x 4	9				
BILGE STRINGER Angle Irons	4 x 4	8	do. at heel	4 x 4	9	4 x 4	9				
Intercoastal plates riveted to plating for length	4 x 4	8	Can the Rudder be unshipped afloat?	4 x 4	9	4 x 4	9				
SIDE STRINGER Angle Irons	4 x 4	8	Bulkheads No. per Rule	4 x 4	9	4 x 4	9				

The FRAMES extend in one length from flange plate to flange plate and thence to Gunwale  
The REVERSED ANGLE IRONS on floors and frames extend from middle line to above upper stringer and to Upper deck 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 4" ins. from centre to centre.  
Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 1/2" in diameter, averaging 3 1/2" ins. from centre to centre.  
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 1/2" in diameter, averaging 3 1/2" ins. from centre to centre.  
Butts of Spar at Bilge for length, treble riveted with Butt Straps, thicker than the plates they connect. The butts 7/8" thick, as per Rule.  
Edges from Bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 1/2" in diameter, averaging 3 1/2" ins. from cr. to cr.  
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 1/2" in diameter, averaging 3 1/2" ins. from cr. to cr.  
Edges of Main Sheerstrake, double or single riveted.  
Butts of Main Sheerstrake, treble riveted for 1/2 length amidships. Butts of Upper Spar Sheerstrake, treble riveted for length amidships.  
Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper Spar Stringer Plate, treble riveted for length amidships.  
Breadth of laps of plating in double riveting 6. 5 1/2 4 1/2 Breadth of laps of plating in single riveting  
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble & double No. of Breasthooks, Six Crutches, Three  
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Keel Plates, 1/2" thick, as per Rule. Iron angles, 1/2" thick, as per Rule. Steel angles, 1/2" thick, as per Rule. Bulbs, 1/2" thick, as per Rule.  
Manufacturer's name or trade mark, Iron plates, Blackton Mill Co. Iron angles, S. Lynch & Co. Steel angles, Blackton Mill Co. Bulbs, S. Lynch & Co.  
The above is a correct description.  
Builder's Signature, John Blumer & Co. Surveyor's Signature, Cecil Williams  
Surveyor to Lloyd's Register of British and Foreign Shipping.



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 at the butts only*

Masts, Bowsprit, Yards, &c., are *Iron & 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 *Please see tracing attached hereto.*  
*Pieces from the plates of which these masts are formed have been tested and have withstood the tests required by the Rules.*  
*Plates manufactured by Stockton Malleable Iron Co*

Number for Equip-ment 19404 Letter for do. <i>p</i>	CABLES, &c.			Test per Certificate, Tons.	Fathoms & Inches per Rule.	Machine where Tested and Superintendent, also Name of Chain Maker.	ANCHORS.			Test per Certificate.	W'ght req'd per Rule.	Machine where Tested and Superintendent, also Name of Anchor Maker.
	Number of Certificate.	Fathoms.	Inches.				Number of Certificate (State if any and which Anchors are Stockless.)	Weight, Ex. Stock.	Test per Certificate.			
<i>One but complete:</i> SAILS. Fore Sails, Fore Top Sails, Fore Topmast Stay Sails, Main Sails, Main Top Sails, and quality <i>Good</i> Warp.....	4499	240	1 1/2	66 1/2	4 1/2	240 1 1/2	31-5-89					
	4499	45 1/2	1	24	18	45 1/2	22-5-89					
	<i>Chains made by G. Hartshorne &amp; Co. and tested at the R. W. C. P. T. by J. Hartness.</i>											
	<i>Chains callipered as per Cir 690 &amp; found in order.</i>											
	<i>Iron Steam Chain or Steel Wire .. at the R. W. C. P. T. by J. Hartness.</i>											
	<i>TOWLINE—Hempen Steel Wire ..</i>											
	90	3 1/2	26	90-10	Steel hawsers certified		21642	31-3-0	29-18-3-0	25-2-0		
	90	2 1/2	15 1/2	90-8 1/2	by Dixon & Corbett		14785	27-1-14	26-13-0-14	21-3-0		
	90	2 1/2	9 1/2	90-6	R. S. Jewell & Co. (S.S.)		Collective Weights		91-3-0	42-3-0		
	90	6	Hump	90-6	R. S. Jewell & Co. (S.S.)		Stream .....	8-3-14	11-0-0-0	8-2-0		
							Kedge .....	4-1-21	6-14-2-0	4-1-0		
							2nd Kedge....	2-1-14	4-14-2-0	2-1-0		

Standing and Running Rigging *Good* Wire & Hemp sufficient in size and *Good* in quality. She has *Two* Long Boats and *two* others.  
The Windlass is *Clarke Chapman & Co. (Steam)* Capstan *4 Co. Winches* and Rudder *Good* Pumps *Good*

Engine Room Skylights. How constructed? *Of iron on iron crammings* How secured in ordinary weather? *Hand screws.*  
What arrangements for deadlights in bad weather? *Leath. Flaps with bulls eyes.*

Coal Bunker Openings. How constructed? *Wrought iron* How are lids secured? *Hatch bars* Height above deck? *48 x 14" no*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *Scuppers, Ports, and Mooring Pipes*

Cargo Hatchways. How formed *Iron plates and angles in the usual way* Hatches, If strong and efficient? *2 1/2" Fir Solid.*  
State size Main Hatch *22-0" x 13-0"* Forehatch *14-0" x 13-0"* Quarterhatch *18-0" x 13-0" & 18-0" x 13-0"*

If of extraordinary size, state how framed and secured... *What arrangement for shifting beams? Efficient*

Order for Special Survey No. <i>33</i> Date <i>21 Feb 89</i>	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	<i>Built under J.P. and surveyed 1889 Jan 23 &amp; 25 &amp; 29 Feb 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; March 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; April 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; May 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; June 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; July 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; Aug 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; Sept 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; Oct 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; Nov 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29 &amp; Dec 1 &amp; 3 &amp; 5 &amp; 7 &amp; 9 &amp; 11 &amp; 13 &amp; 15 &amp; 17 &amp; 19 &amp; 21 &amp; 23 &amp; 25 &amp; 27 &amp; 29</i>
Order for Ordinary Survey No. <i>34</i> Date <i>21 Feb 89</i>		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..	<i>August 11</i>
No. <i>76</i> in builder's yard.		5th. After the ship was launched and equipped	

Total No. of Visits *59*

State dates of letters respecting this case *20<sup>th</sup> December 1888, 15<sup>th</sup> & 22<sup>nd</sup> March 1889.*

General Remarks (State quality of workmanship, &c.) *This steel screw steamer has been built in accordance with the approved photo-prints of Midship Section and Profile as amended, the Secretary's letters of the above dates, and in general conformity with the Rules for the class contemplated.*  
*The workmanship throughout is good.*  
*The steel used in her construction was manufactured by the Firms mentioned on the front of this Report, and it has been tested as required by Notice No 436, and iron rivets only have been used in her throughout.*  
*She has a bilge keel formed of built iron 8 x 7/8 with double angles 4 x 3 x 7/8 fitted for a length of one hundred and thirty feet amidships.*  
*The lower anchors are "Parries' patent stockless steel" and these have been subjected to drop and mechanical tests by Messrs E. R. Smith & G. Lewis and the marks on them correspond with the certificates issued by those gentlemen.*  
*Particulars of water ballast will be found on form attached hereto.*

How are the surfaces preserved from oxidation? Inside *Portland cement & Paint* Outside *Paint*

Particulars for Record in R.B.—Length of Poop *✓* ft., R.Q.D. *89* ft, Bridge Dk., *106* ft, F'castle *29.5* ft.; No. of Dks. (excluding spar, awn., &c.) *One*  
Material of dks. *Iron* If spar, awn. dk., &c. *✓* Material of spar, awn. dk., &c. *✓*; No. of tiers of beams (with and without dks. laid) *One*  
Official No. *95294*; Signal Letters *✓* If double bottom, state particulars on separate form. *7*  
I am of opinion this Vessel should be Classed *100 A 1 "Steel" (1 1/2" iron)* *Freibord to be recorded (winter 1889 & summer 1890)*  
The amount of the Entry Fee ..... £ *4 : 0 : 0* is received by me, *20/8/89*  
Special ..... £ *63 : 9 : 0* *20/8/89*  
(to be sent as per margin). Certificate .....  
(Travelling Expenses, if any, £ .....)  
Committee's Minute *100 A 1 Steel*  
Character assigned *100 A 1 Steel*  
*ARP 100 A 1 Steel frames Well deck*  
*+ LMC*  
*Surveyor to Lloyd's Register of British and Foreign Shipping.*  
*It is submitted that this vessel appears eligible to be classed 100 A 1 (Steel) as recommended.*  
*T. B. (Iron) & L. B. (Frames)*  
*All D.B. (particulars) appended.*  
*Will Dk.*  
*20/8/89*  
*W. Williams*  
*Lloyd's Register*  
*Foundation*