

IRON SHIP.

To 15431 Survey held at Newcastle Date, First Survey 15 June Last Survey 23 Dec. 1891

On the *Sen. S. "Principia"* Master *H. Kerrish*

TYPE OF VESSEL, THREE DECKED VESSEL. Built at *Newcastle*

SPAR, OR AWNING DECKED VESSEL. When built *1881* Launched *8 Nov. 1881*

By whom built *Messrs. Palmers & Co. (Ld.)*

Owners *Messrs. Newton & Co.*

Residence *19 Rutger Street*

Port belonging to *London*

Destined Voyage *Bombay*

If Surveyed while Building, Afloat, or in Dry Dock.

Length	314.16	Power of Engines	300
Half Breadth	19.50	No. of Decks with flat laid	two
Depth	28.83	No. of Tiers of Beams	three
Girth of Half Midship Frame	43.58		
1st Number	91.91		
1st Number, if a 3-Decked Vessel	deduct 7 feet		
Length	84.91		
2nd Number	266.75		
Proportions— Breadths to Length	8.05		
Depths to Length— Upper Deck to Keel	10.89		
Main Deck ditto	14.72		

Dimensions of Ship per Register, length, breadth, depth,	Inches. In Ship.	Inches. In Ship.	16ths. In Ship.	Inches. per Rule.	Inches. per Rule.	16ths. per Rule.
Flat Keel Plates, breadth and thickness	40	12	40	12		
PLATES in Garboard Strakes, br'dth & thickness	40	12	40	12		
From Garboard to upper part of Bilges	alternately					
Of d'bling at Bilge, or increased thickness, and length applied	alternately					
From up. prt of Bilge to lr. edge of Sh'rstrake	alternately					
Main Sheerstrake, breadth and thickness	41	13	40	13		
Of d'bling at Sh'stk. & lng. applied						
From M'n. to Up. or Spar Dk. Sh'rstrake						
Up. or Spar Dk Sh'rstrake, br'dth & thickness						
Butt Straps to outside plating, breadth & thickness	10.6	7	8.5	11	8.5	11
Lengths of Plating	6 frame spaces					
Shifts of Plating, and Stringers	2 frame spaces					
Gunwale Plate on ends of Awning Spar	45	9	45	9		
Upper Deck Beams, breadth and thickness						
Angle Iron on ditto	4	4	9	4	4	9
Tie Plates fore and aft, outside Hatchways	Iron deck 6/16					
Diagonal Tie Plates on Beams No. of Pairs						
Flat of Up., Spar, or Awning Dk.	Iron 6/16 & G. Riv. 3/4					
How fastened to Beams	galvaniz. in Saw bolt & nuts					
Stringer Plate on ends of Main or Middle Deck	45	10	45	10		
Beams, breadth and thickness						
Is the Stringer Plate attached to the outside plating?	Yes					
Angle Irons on ditto, No. 2	4	4	9	4	4	9
Tie Plates, outside Hatchways	Iron deck					
Diagonal Tie Plates on Beams, No. of pairs						
Flat of Middle Deck* do. do.	Iron 7 - 7					
How fastened to Beams	Riveted					
Stringer Plates on ends of Lower Deck, Hold	41	9	41	9		
Galop Beams						
Is the Stringer Plate attached to the outside plating?	Yes					
Angle Irons on ditto, No. 3x4	4	4	9	4	4	9
Stringer or Tie Plates, outside Hatchways	6	4	10	6	4	9
Flat of Lower Deck*						
Ceiling betwixt Decks, thickness and material	3/2 Fir					
" in hold do. do.	8					
Main piece of Rudder, diameter at head	8					
do. at heel	4					
Can the Rudder be unshipped afloat?	Yes					
Bulkheads No. 5 No. per Rule	4					
" Thickness of 8/16 x 7/16						
" Height up Upper deck, after one as per rule						
" How secured to sides of ship	Between double frames					
" Size of Vertical Angle Irons 3 1/2 x 3 1/2 x 8/16 and distance apart	30 ins.					
" Are the outside Plates doubled two spaces of Frames in length?	Yes					

FRAMES extend in one length from *Keel* to *gunwale* Riveted through plates with *7/8* in. Rivets, about *6 1/4* apart.

REVERSED ANGLE IRONS on floors and frames extend *near* middle line to *Main deck* and to *Upper deck* alternately

SONS. Are the various lengths of Plates and Angle Irons properly connected? *Yes* And butts properly shifted? *Yes*

ING. Garboard, double riveted to Keel, with rivets *1 1/8* in. diameter, averaging *5 1/4* 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 *3 1/2* ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 1/2* ins. from centre to centre.

Butts of *3* Strakes at Bilge for *1/2* 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 *7/8* in. diameter, averaging *3 1/2* ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 1/2* ins. from cr. to cr.

Edges of Main Sheerstrake, double & single riveted. ~~Upper Sheerstrake, double or single riveted.~~

Butts of Main Sheerstrake, treble riveted for *1/2* length amidships. Butts of Upper or Spar Sheerstrake, treble riveted ~~length~~ amidships.

Butts of Main Stringer Plate, treble riveted for *1/2* length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for *1/2* length.

Breadth of laps of plating in double riveting *5 1/4* Breadth of laps of plating in single riveting *5*

laps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Yes* No. of Breasthooks, *5* Crutches, *3 or 2 transoms*

Description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Palmers' Iron*

Manufacturer's name or trade mark, above is a correct description? *James Sibun*

Surveyor's Signature, *James Sibun* Surveyor to Lloyd's Register of British and Foreign Shipping.

Workmanship. Are the butts of plating planed or otherwise fitted? *All Butts, & Edges of outer strakes 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 very well*
 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 very few*

Masts, Bowsprit, Yards, &c., are *of iron & in good* condition, and sufficient in size and length. If of Iron or Steel give Scantlings of Material Master
 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 Material Engines
 State also Length and Diameter of Lower Masts and Bowsprit *Fore mast 81.3, main mast 74.1 of 26 in Boilers*
and 24 in diam. respectively; Plates 11.4 in length & 8.1/2, 7.1/2 & 4.1/2 in Register
thickness in foremast & 3/16 & 1/8 in main mast. Butt straps 1/2 thicker and
treble rivetted, landing edges double rivetted. Makers. Palmers favour

NUMBER for EQUIPMENT	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Supplied.	ANCHORS.				Machine Tested & Supplied.	
								No.	Weight. Ex. Stock.	Test per Certificate.	Wght req'd per Rule.		
31761	Fore Sails,	Chain	300	1 1/2	67 1/2	1 1/2	Shawkeel, P.H. - L.S. signed Robert Rowland	Bower Anchors	1	37.2.0	34.2.2.0	36.2.0	Marked T.P.H. - L.S. signed Robert Rowland
	Fore Top Sails,	Iron Stream Chain	90	1 1/8	22 3/4	1 3/16		1	36.3.14	33.13.120			
	Fore Topmast Stay Sails,	or Steel Wire											
	Main Sails,	or Hempen Strm Cable	100	12		100-12							
	Main Top Sails,	Towline, Hemp						Stream Anchor	1	11.3.12	13.10.00	11.2.0	
	and	or Steel Wire						Kedge	1	5.2.7	7.18.1.21	5.2.0	
	Standing and Running Rigging	Hawser	90	10		90-10		2nd Kedge	1	2.3.0	5.1.4	2.3.0	
		Warp	90	8 1/2		90-8 1/2							
		quality good	160	7 1/2									
		wire & hemp	120	6 1/2									

The Windlass is *good* Capstan *good* and Rudder *good* Pumps *Metal & good*
 Engine Room Skylights.—How constructed? *on bridge deck* How secured in ordinary weather? *with thumb screw*
 What arrangements for deadlights in bad weather? *Solid Teak shutters & thick circular glass*
 Coal Bunker Openings.—How constructed? *Plate framing* How are lids secured? *Solid hatch* Height above deck? *14 ins*
 Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *10 Ports & 6 Scuppers on each side*

Cargo Hatchways.—How formed? *Iron plate coverings & Headledges*
 State size Main Hatch *24.0 x 12.0* Fore hatch *12.0 x 9.0* Quarter hatch *28.10 x 12.0 x 16.0 x 12.0*
 If of extraordinary size, state how framed and secured?
 What arrangement for shifting beams? *Deep web plates as per profile*
 Hatches, if strong and efficient? *2 3/4 solid*

Order for Special Survey No.	Date	Order for Ordinary Survey No.	Date	No.	in builder's yard.	DATES of Surveys held while building as per Section 18.	1st.	2nd.	3rd.	4th.	5th.
1500	17 th Jan 1881			448			On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the process of riveting	When the beams were in and fastened, and before the decks were laid....	When the ship was complete, and before the plating was finally coated or cemented..	After the ship was launched and equipped
							1881 June 15. 23. 28 July 6. 8. 14. 16. 19. 25. 28	Aug ^r 5. 8. 10. 11. 12. 15. 17. 26. Sept 1. 5. 4	8. 13. 15. 17. 19. 22. 26. 28. 30 Oct 3. 5. 10	12. 18. 22. 26. Nov 1. 3. 7. 9. 11. 15. 16. 18. 2	22. 26. Dec 5. 6. 8. 12. 13. 15. 18. 20. 21. 23

General Remarks (State quality of workmanship, &c.) *This vessel has been constructed in accordance with the rules and approved tracings of Midland section & Profile; She has a deep water-ballast tank in fore hold, extending from the foremost Bulkhead of Engine room, forward for about 24 ft & of the height of the Hold Beam stringer; Ballast tanks are also fitted through the length of the After hold, & under the Engines & Boilers tested to a Head of water not less than the height of the load draught of the vessel & proved very satisfactory in length; She has a short Poop about 40 feet in length; Bridge House about 72 ft in length and an open Top-gallant Fore-castle about 46 ft in length, and the workmanship and materials throughout are of a good description. A sister vessel to "Darier" report No. 15457*

State if one, two, or three decked vessel, or if open, or awning decked; and the lengths of poop, bridge, fore-castle, &c. (If double bottom, state particulars on separate form.)
 How are the surfaces preserved from oxidation? Inside *Portland cement to upper* Outside *3 Coats of paint*
 I am of opinion this Vessel should be Classed *100 A I* turn of Bilges & paint-above
 The amount of the Entry Fee ... £ 5 : - : - is received by me, *W. J. W.*
 Special ... £ 91 : 15 : - *24th Dec 1881*
 Certificate *grati* - : - : -
 (Travelling Expenses, if any, £ - - -).
 Committee's Minute *27/12/81*
 Character assigned *100 A I*
 Tuesday, December, 27th. 1881.
 Surveyor to Lloyd's Register of British and Foreign Shipping
 This vessel appears eligible to be classed
 100 A-I as recommended
 25th Dec 1881
 3 Trs Bms
 Lloyd's Register
 Foundation