

# IRON SHIP.

No. 12364 Survey held at Newcastle Date, First Survey April 15<sup>th</sup> Last Survey Aug 20<sup>th</sup> 1875  
On the "Orari" sailing ship Master Jas. Fox

TONNAGE under Tonnage Deck } 885.08  
Ditto of Third, Spar, or Ayring Deck. }  
Ditto of Poop, 103.02  
Ditto of Mouses 25.84  
Ditto of Forecasts 40.41  
Gross Tonnage 1054.35  
Less Crew Space 39.49  
Less Engine Room  
Register Tonnage as cut on Beam } 1014.86

ONE OR TWO DECKED, ~~THREE DECKED~~ VESSEL.  
~~SPAR, OR AYRING DECKED VESSEL.~~  
Feet.  
HALF BREADTH (moulded) ... .. 17.00  
DEPTH from upper part of Keel to top of Upper Deck Beams 22.20  
GIRTH of Half Midship Frame (as per Rule) ... .. 33.93  
1st NUMBER ... .. 75.13  
1st NUMBER of a ~~THREE DECKED~~ VESSEL [deduct 7 feet  
LENGTH ... .. 193.83  
2nd NUMBER ... .. 14174  
PROPORTIONS—Breadths to Length ... .. under 6  
Depths to Length—Upper Deck to Keel ... .. under 9  
Main Deck ditto ... ..

Built at Newcastle  
When built 1875 Launched 21<sup>st</sup> July  
By whom built Palmers S. & S. Co. Ltd.  
Owners New Zealand Shipping Co.  
Port belonging to London  
Destined Voyage New Zealand  
Surveyed while Building, ~~Afloat, or in Dry Dock.~~

LENGTH on deck as per Rule ... 193 Feet. 10 Inches. BREADTH—Moulded ... 34 Feet. 0 Inches. DEPTH top of Floors to Upper Deck Beams ... 20 Feet. 3 1/2 Inches. Do. do. Main Deck Beams ...  
Power of Engines ...  
Horse.  
N<sup>o</sup>. of Decks with flat laid two  
N<sup>o</sup>. of Tiers of Beams two

Dimensions of Ship per Register, length, 204.1 breadth, 34.2 depth, 20.0

	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 ... ..	8 x 2 3/8	8 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	23 in	23 in	(Class 100A)	
STEM, moulding and thickness ... ..	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8				
STERN-POST for Rudder do. do. ... ..	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8	7 1/2 x 2 3/8				
Distance of Frames from moulding edge to moulding edge, all fore and aft ... ..										
FRAMES, Angle Iron, for 2 length amidships ...	5	3	5	3	5	3				
Do. for 1/2 at each end ... ..	5	3	5	3	5	3				
REVERSED FRAMES, Angle Iron ... ..	3	3	3	3	3	3				
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships ...	23	9	23	9	23	9				
thickness at the ends of vessel ... ..	11 1/2	7	11 1/2	7	11 1/2	7				
depth at 1/2 the half-bdth. as per Rule ...	46	46	46	46	46	46				
height extended at the Bilges ... ..										
BEAMS, Upper, <del>Spar, or Ayring Deck</del> Single or double Ang. Iron, Plate or Tee Bulb Iron } Single or double Angle Iron on Upper edge ...	8	8	8	8	8	8				
Average space ... ..	3	3	3	3	3	3				
BEAMS, <del>Main, or Middle Deck</del> Single or double Ang. Iron, Plate or Tee Bulb Iron } Single or double Angle Iron on Upper Edge ...	8	8	8	8	8	8				
Average space ... ..	3	3	3	3	3	3				
BEAMS, Lower Deck, <del>Hold, or Orlop</del> Single or double Ang. Iron, Plate or Tee Bulb Iron } Single or double Angle Iron on Upper Edge ...	8	8	8	8	8	8				
Average space ... ..	3	3	3	3	3	3				
KEELSONS Centre line, single or double plate, <del>Iron, or Intersected, Plates</del> ...	11	11	11	11	11	11				
Rider Plate ... ..	11	11	11	11	11	11				
Bulk Plate to Intersected Keelson ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
Angle Irons ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
Double Angle Iron Side Keelson ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
Side Intersected Plate ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
Attached to outside plating with angle iron ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
BILGE Angle Irons ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
do. Bulk Iron ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
do. Intersected plates riveted to plating for length ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
BILGE STRINGER Angle Irons ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
Intersected plates riveted to plating for length ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
SIDE STRINGER Angle Iron ... ..	5	3 1/2	5	3 1/2	5	3 1/2				
Transoms, material. Knight-heads. Hawse Timbers. ... ..										
Windlass <u>Emerson &amp; Walker</u> Pall Bitt ... ..										

	Inches in Ship.	16ths in Ship.	Inches required	16ths required
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied ... ..	34	10	34	10
fin up. part of Bilge to l. edge of Sh'rstrake		9		9
Main Sheerstrake, breadth and thickness of doubling at Sh'rstrake, & length applied from Main to Upper or Spar Deck Sh'rstrake.	36	11	36	11
Upper or Spar Deck Sh'rstrake, breadth & thickness		6		6
Butt Straps to outside plating, breadth & thickness	10 to 16	8 to 12	9 1/2 to 14 1/2	8 to 12
Lengths of Plating ... ..	12 feet		10 feet	
Shifts of Plating, and Stringers ... ..	2 frame spaces			
Gunwale Plate on ends of <del>Lower Spar, or</del> Upper Deck Beams, breadth and thickness ...	40	9	40	9
Angle Iron on ditto ... ..	5 x 3 1/2 x 7		5 x 3 1/2 x 7	
Tie Plates fore and aft, outside Hatchways ...	11	9	11	9
Diagonal Tie Plates on Beams No. of Pairs, <del>Plancher material and scantling</del> ... ..				
Waterways do. do. ... ..				
Flat of Upper Deck do. do. ... ..				
How fastened to Beams ... ..				
Stringer Plate on ends of <del>Main or Middle Deck</del> Beams, breadth and thickness ...	24	7		
Is the Stringer Plate attached to the outside plating?				
Angle Irons on ditto, No. 1 ... ..	3 1/2 x 3 x 7/8			
Tie Plates, outside Hatchways ... ..	8	7		
Diagonal Tie Plates on Beams, No. of pairs, <del>Waterways material and scantlings</del> ... ..				
Flat of Middle Deck do. do. ... ..	4 Pine 3 in			
How fastened to Beams ... ..	nut & screw bolts			
Stringer Plates on ends of Lower Deck, <del>Hold or</del> Orlop Beams ... ..	29	8	29	8
Is the Stringer Plate attached to the outside plating?	yes			
Angle Irons on ditto, No. 2 ... ..	3 1/2 x 3 1/2 x 8		3 1/2 x 3 1/2 x 8	
Stringer or Tie Plates, outside Hatchways ...	11	8	11	8
Flat of Lower Deck ... ..	4 Pine 3 in			
Ceiling betwixt Decks, thickness and material ...	13 Red wood 2 1/2 in			
in hold do. do. ... ..				
Main piece of Rudder, diameter at head ...	5		5	
do. at heel ... ..	3		3	
Can the Rudder be unshipped afloat? <u>yes</u>				
Bulkheads No. 1 Thickness of <u>9/16</u>				9/16
Height up <u>Upper deck</u>				
How secured to sides of ship <u>double frame</u>				
Size of Vertical Angle Irons <u>3 x 3 x 7/8</u> and distance apart <u>30</u> ins.				
Are the outside Plates doubled two spaces of Frames in length? <u>yes</u>				

The FRAMES extend in one length from Keel to gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.  
The REVERSED ANGLE IRONS on floors and frames extend from middle line to upper and to lower 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 3/8 ins. from centre to centre.  
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 3/8 ins. from centre to centre.  
Butts of 3 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 7/8 thicker than the plates they connect.  
Edges from bilge to Main Sheerstrake, worked clencher, double ~~single~~ riveted; with rivets 3/4 in. diameter, averaging 3 3/8 ins. from cr. to cr.  
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 3/8 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 length amidships.  
Breadth of laps of plating in double riveting 4 1/4 Breadth of laps of plating in single riveting

Butt Straps of Keelsons, Stringer and Tie Plates, treble ~~double~~ Riveted?  
Waterway, how secured to Beams riveted (Explain by Sketch, if necessary)  
Beams of the various Decks, how secured to the sides? did knees riveted to frames No. of Breasthooks, 4 Crutches, 4  
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Ordinary ship iron  
Manufacturer's name or trade mark, Palmers S. & S. Co. (Ld.) Plated plates, Common

The above is a correct description.  
Builder's Signature, John P. Wilson Surveyor's Signature, Geo. J. Cooper  
Surveyor to Lloyd's Register of British and Foreign Shipping

1000 (24/8/14).  
Lloyd's Register of British and Foreign Shipping  
Foundation



Workmanship. Are the butts of plating placed or other fastened? *Welded*  
Do the rivets of the work and of the butts fit close together throughout their length without requiring any making good of the rivets? *Yes*  
Are the butts between the ribs and plates solid single pieces? *Yes*  
Do the holes for riveting plate to frames, built 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? *few* 1505 Iron

Masts, Bowsprit, Yards, &c., are *New* 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 Iron 74.6 x 24 - Plate 7/16 to 5/8 - Seams double Butts triple  
Fore " " 75.6 x 24 do do do do do do  
Mizen - P. Pine 69 x 21 do 8/16 x 7/16 do do do do  
Bowsprit Iron 34 x 30 do 8/16 x 7/16 do do do do  
Butt straps on outside of mast.  
Diaphragm plate 12 ft x 8/16 in bowsprit in way of knight heads.

NUMBER for EQUIPMENT 15119															
No.	SAILS.	CABLES, &c.	Chain	Fathoms.	Inches.	Certificate.	req'd pr Rule.	per Rule.	ANCHORS.		No.	Ex. Stock.	Certificate.	per Rule.	per Rule.
No. of principal parts.				275	1 1/4	5 1/4	270-1 1/4	5 1/4 tons		Bowers	1	28-3-0	27-13-1-0	27 1/2	26 1/2
	Fore Sails,	(State Machine where Tested, Date, & name of Suprintd.)	Chain	L.P.H. L.W.	13 1/2	71 3/4	13.5	71 3/4	(State Machine where Tested, Date, & name of Suprintd.)		1	28-2-17	27-12-1-7	27 1/2	26 1/2
	Fore Top Sails,														
	Fore Topmast Stay Sails														
	Main Sails,														
	Main Top Sails,														
				90	15/16	90-15	90-15	90-15		Stream	1	11-1-0	11	5 1/2	
				90	11	90-9	90-9	90-9		Kedges	1	5-5-0	2 3/4	2 3/4	
				90	9	90-5 1/2	90-5 1/2	90-5 1/2			1	2-3-0	2 3/4	2 3/4	2 3/4
				90	6	90-5 1/2	90-5 1/2	90-5 1/2			1	2-3-0	2 3/4	2 3/4	2 3/4
				90	4	90-5 1/2	90-5 1/2	90-5 1/2			1	2-3-0	2 3/4	2 3/4	2 3/4

Standing and Running Rigging *Wire & Rope* sufficient in size and *good* in quality. She has *one* Long Boat and *5 others*  
The Windlass is *good* Capstan *good* and Rudder *good* Pumps *good & sufficient*.

Engine Room Skylights. How constructed? *How secured in ordinary weather?*

Coal Bunker Openings. How constructed? *How are lids secured?* *Height above deck?*

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

Cargo Hatchways. - How formed? *Plates & Angle iron*

State size Main Hatch *15.4 x 10'* Forehatch *4.8 x 6'* Quarterhatch *4.8 x 8'*

If of extraordinary size, state how framed and secured? *Ordinary size*

What arrangement for shifting beams? *Web plate & fore & after*

Hatches, If strong and efficient? *Yes*

Order for Special Survey No. *1075* Date *9 April 1875*  
Order for Ordinary Survey No. *1075* Date *9 April 1875*  
No. *321* in builder's yard.

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 *1075 April 18. 21. 22. 29. May 4. 6. 20*  
2nd. On the plating during the process of riveting *24. 28. June 3. 9. 12. 17. 22. 24. 25. July*  
3rd. When the beams were in and fastened, and before the decks were laid. *8. 12. 22. 28. Aug 4. 9. 12. 14. 16. 19. 23. 27.*  
4th. When the ship was complete, and before the plating was finally coated or cemented. *30.*  
5th. After the ship was launched and equipped *30.*

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

*This is a full rigged sailing ship built in accordance with the approved midsection.*

*She has full poop 58 feet long & topgallant forecabin 30 ft. long (scantlings given above).*

*Her lower & lower topsail yards on fore & main mast are iron 5/8 to 5/16 plates - with lapped joints treble riveted.*

*She has spare lower yard of iron, spare topmasts, topgallant masts & jibboom of P. Pine.*

*Workmanship & material are alike very satisfactory.*

*100A*

*100A*

*100A*

*100A*

*100A*

*100A*

*100A*

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