

# Steel-IRON SHIP.

No. 5693 Survey held at Glasgow Date, First Survey 20<sup>th</sup> Oct 1881 Last Survey 24<sup>th</sup> April 1882

On the Steel S.S. or "Austral" (4 masts)

TONNAGE under 3917.46 ONE, OR TWO DECKED, THREE DECKED VESSEL.  
 Ditto of Third, 1397.84 SPAR, OR AWNING DECKED VESSEL.  
 Ditto of Poop, or 513.30  
 Ditto of Houses, 22.90  
 Gross Tonnage 5500.20  
 Less Crew Space 259.92  
 Less Engine Room 2039.05  
 Register Tonnage 3202.23

Half Breadth (moulded) 24.0  
 Depth from upper part of Keel to top of Upper Deck Beams 37.8  
 Girth of Half Midship Frame (as per Rule) 55.6  
 1st Number 117.4  
 1st Number, if a 3-Decked Vessel deduct 7 feet 110.4  
 Length 454  
 2nd Number 501216  
 Proportions— Breadths to Length 9.4  
 Depths to Length— Upper Deck to Keel 12.01  
 Moulded depth 37 feet

Master Jno Murdoch  
 Built at Glasgow  
 When built 1881 Launched 24<sup>th</sup> Dec  
 By whom built Jno Elder & Co  
 Owners Orient S.N. Co (Lim)  
 Residence 13 Fenchurch Avenue  
 Port belonging to Glasgow  
 Destined Voyage Chy (Lim) Australia  
 Surveyed while Building, Afloat, or in Dry Dock

LENGTH	Feet.	Inches.	BREADTH	Feet.	Inches.	DEPTH	Feet.	Inches.	Power of	Horse.	N <sup>o</sup> . of Decks with flat laid	N <sup>o</sup> . of Tiers of Beams
on deck as per Rule	454	-	Moulded	40	-	top of Floors to Upper Deck Beams	34	00	Engines	1000	4	4
Do. do. Main Deck Beams												
Dimensions of Ship per Register, length, 456			breadth, 40			depth, 33.96						
KEEL, depth and thickness	Iron	12 x 3 1/2				12 x 3 1/2						
STEM, moulding and thickness		12 x 3 1/2				12 x 3 1/2						
STERN-POST for Rudder do. do.		12 x 7				12 x 7						
" " for Propeller		13 x 7										
Distance of Frames from moulding edge to moulding edge, all fore and aft		24				24						
FRAMES, Angle Iron for 1/2 length amidships		6 3 0				6 3 0						
Do. for 1/2 at each end		6 3 7				6 3 7						
REVERSED FRAMES, Angle Iron	Steel	4 1/2 3 1/2 7				4 1/2 3 1/2 7						
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships		as per section approved										
thickness at the ends of vessel		3 1/2 - 8.7				3 1/2 - 8.7						
depth at 1/2 the half-bdth. as per Rule		as per section approved										
height extended at the Bilges		as per section approved										
BEAMS, Upper, Spar, or Awning Deck		10 6 0				10 6 0						
Single or double Angle Iron, Plate or Tee Bulb												
Single or double Angle Iron on Upper Edge												
Average space		as per section approved										
BEAMS, Main, or Middle Deck		11 6 9				11 6 9						
Single or double Angle Iron, Plate or Tee Bulb												
Single or double Angle Iron on Upper Edge												
Average space		as per section approved										
BEAMS, Lower Deck		11 6 9				11 6 9						
Single or double Angle Iron, Plate or Tee Bulb												
Single or double Angle Iron on Upper Edge												
Average space		as per section approved										
BEAMS, Hold, or Orlop		10 5 1/2 0				10 5 1/2 0						
Single or double Angle Iron, Plate or Tee Bulb												
Single or double Angle Iron on Upper Edge												
Average space		as per section approved										
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates		15 12 15 12										
Rider Plate		13 11 13 11										
Vertical Bulb Plate to Intercoastal Keelson		4 1/2 12 4 1/2 12										
Angle Irons		6 1/2 4 1/2 0 6 1/2 4 1/2 0										
Double Angle Iron Side Keelson		as approved										
Margin Side Intercoastal Plate		11 11										
do. Angle Irons		3 1/2 3 1/2 7 3 1/2 3 1/2 7										
Attached to outside plating with angle iron		3 1/2 3 1/2 7 3 1/2 3 1/2 7										
BILGE Angle Irons (4)		6 1/2 4 1/2 0 6 1/2 4 1/2 0										
do. Bulb Iron Plate Keelson		20 (24 ft) 11 20 (24 ft) 11										
do. Intercoastal plates riveted to plating for 2 1/4 length		10 10										
BILGE STRINGER Angle Irons		6 1/2 4 1/2 0 6 1/2 4 1/2 0										
Intercoastal plates riveted to plating for		10 - -										
Before cellular bottom fore & aft		6 1/2 4 1/2 0 6 1/2 4 1/2 0										
SIDE STRINGER Angle Irons for 2 1/4 ft		6 1/2 4 1/2 0 6 1/2 4 1/2 0										

The FRAMES extend in one length from Keel to upper deck

The REVERSED ANGLE IRONS on floors and frames extend from margin side to above middle deck and to upper deck alternately

KEELSONS. Are the various lengths of Plates and Angle Irons properly connected? Yes

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

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

Butts of all Strakes at Bilge for 3/4 length, treble riveted with Butt Straps, 3/6 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 clencher, double riveted; with rivets 7/8 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 3/4 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.

Butts of Main Stringer Plate, treble riveted for 3/4 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 3/4 length.

Breadth of laps of plating in double riveting 5 1/2 Breadth of laps of plating in single riveting

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

What description of Steel is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c? Steel Coy of Scotland

Manufacturer's name or trade mark, Hawthorne, Steel Coy of Scotland

The above is a correct description

Builder's Signature, Jno Elder & Co

Surveyor's Signature, For the late Mr. Latham, and

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? *Very few*

Masts, Bowsprit, Yards, &c., are *Iron* in *good* condition, and sufficient in size and length. *of Iron* 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

*Foremast* heel to pole, *150' 1" x 33'* } 3 plates in round *1/2* at partens Butto part trouble  
*Mainmast* heel to pole, *139' 3" x 22'* } *There is with the lands double riveted, double at*  
*Uppermast* heel to pole, *114' 3" x 18'* } *middle and upper decks 3 angle bars in fore and main*  
*Lowermast* heel to pole, *96' x 21' x 16'* } 2 plates in round *3/16* at partens Butto trouble riveted Hallside steel.  
*Bowsprit* heel to pole, *80' x 16' x 16'* }

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate	Inches.	Machine where Tested & Suprntd.	ANCHORS.	N <sup>o</sup> of Anchors	Weight. Ex. Stock.	Test per Certificate	Wght req'd	Machine where Tested & Suprntd.
SAILS.		CABLES, &c.	150	2 1/2	10 1/2	300 2 1/2	LPH BC Rodgers Bower Anchors	50	54.1.21	45	54.1.21	LPH BC 9 W Pann
N <sup>o</sup> .	Chain	150	"	"	300 2 1/2	No 100/10 9 W Pann	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)					
Fore Sails,	Iron Stream Chain	300	4	17 1/2	90 1 1/2	24 BC No 12 9 W Pann		45	49.2.21	42 1/2	49.2.21	"
Fore Top Sails,	Steel Wire	90	1 1/2	5 1/2	120 5 1/2	Bulwer & Co		46	44.2.21	39	44.2.21	"
Fore Topmast Stay Sails,	Hempen Stream Cable	120	5 1/2	7 1/2	360 3	"	Stream Anchor	47	25.0.21	24 7/10	25.0.21	"
Main Sails,	Steel Wire	90	3 1/2	2 1/2	120 12	"	Kedge	40	15.3.7	17	15.3.7	"
Main Top Sails,	Hawser	120	12	"	240. 9	"	2nd Kedge	49	7.3.0	10 1/2	7.3.0	"
and	Warp	(2)	9	"	360. 6	"						
	quality	(2)	6	"								

Standing and Running Riggering *Wine Hemp* sufficient in size and *good* in quality. She has *4* life *long* Boats and *6* others (as a stopper). The Windlass is *Iron Steam* Capstan and Rudder *good* Pumps *good*

Engine Room Skylights. How constructed? *on promenade deck* How secured in ordinary weather? *by bolts*

What arrangements for deadlights in bad weather? *strong gratings and glass*

Coal Bunker Openings. How constructed? *side ports and tops* How are lids secured? *lids & doors* Height above deck? *flush*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *open rail and Ventilation bulwarks*

Charge Hatchways. How formed? *Iron Cornings*

State size Main Hatch *11' 9" x 11' 9"* Fore hatch *11' 10" x 9' 9"* Quarter hatch *11' 5" x 6' 11"*

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

What arrangement for shifting beams? *2 shifting beams in engine hatchway at upper deck*

Hatches, If strong and efficient? *Yes*

Order for Special Survey No. *1549* Date *15 Dec 1880*  
Order for Ordinary Survey No. *1549* Date *15 Dec 1880*  
No. *249* 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 *10 Dec 20 22 23 Nov 3. 5. 11. 12. 13. 10. 19. 22. 25. 30.*  
2nd. On the plating during the process of riveting *Dec 2. 4. 10. 14. 21. 23. 29. 10 Dec 1. 11. 12. 25. 26. 29*  
3rd. When the beams were in and fastened, and before the decks were laid... *Feb 4. 10. 11. 15. 17. 22 Mar 4. 7. 11. 14. 22. 24. 25. 31. Apr 14. 10. 20. 22. 27*  
4th. When the ship was complete, and before the plating was finally coated or cemented... *May 2. 3. 6. 9. 11. 17. 19. 20. 23. 25. June 1. 3. 8. 9. 14. 17. 20. 23. 24. 29*  
5th. After the ship was launched and equipped *July 1. 11. 13. 14. Aug 1. 5. 9. 11. 13. 17. 23. 29. 31. Sep 2. 5. 8. 16. 22. 23. 26. Oct 4. 7. 11. 15. 17. 24. 25. Nov 2. 9. 16. 23. 24. 29. Dec 2. 5. 7. 12. 19. 22. 10 Dec 1. 11. 12. 25. 26. 29. Feb 7. 14.*  
General Remarks (State quality of workmanship, &c.) *17. 27 Mar 3. 10. 14. 21. 27. 31. Apr 17. 19. 21. 22. 24.*

This report has been made partly from notes left by Mr. Laphorn and otherwise from details obtained since his death, at which time the vessel was in the docks laid, the bottom coated and the Water Ballast compartments were being riveted and caulked. The Workmanship is good and the scantlings are in accordance with the approved and appended Plans. The Secretary's letters relating to her are dated, 7<sup>th</sup> 28<sup>th</sup> 6<sup>th</sup> 10<sup>th</sup> 12<sup>th</sup> Nov. 1880, 14<sup>th</sup> Jan'y, 16<sup>th</sup> June, 13<sup>th</sup> 28<sup>th</sup> Decr 1881 & 25<sup>th</sup> Jan'y 1882. She is fitted for Water Ballast in the fore cellular double bottom and Ballast Tanks as per description appended (and sketch forwarded on 22<sup>nd</sup> April 82) These compartments except the peak are divided at the centre line and have been separately tested in accordance with the rules, the hulkwork frames and plating are additionally stiffened with an 8<sup>th</sup> vertical bulkhead extending in nearly a fore-and-aft direction on each side and attached to the after transom. The hulkwork plating and frames, and to the beams and plating of the middle deck above, after launching she grounded on some piles at the (Pier) wharves, which caused the landing edge of the stake on the port side and B. C. & D. in one frame open on starboard side to be indented, under the after part of the foremost compartment of the cellular bottom. When placed in dry dock some rivets were removed and the indentations examined and nearly set fair without heating the plates.

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, fore-castle, or raised quarter deck. (If double bottom, state particulars on separate form.) Promenade decks (with cabins under) 22 feet by 11 feet 6 inches aft 30' x 17' 6" Seacock's Cap. How are the surfaces preserved from oxidation? Inside *Cement and paint* Outside *Paint*

I am of opinion this Vessel should be Classed *+ 100 A 1 Steel* 4 Docks (2 steel 2 iron) 4 others of beam

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, *W. T. 25/4/1882*

Special ... £ 158 : 4 : 0 Certificate ... 0 : 0 : 0 (to be sent as per margin.)

Committee's Minute *100 A 1 Steel* Tuesday, 2nd May, 1882

Character assigned *Steel* 4 Dks 2 Steel 2 Iron Double Bottom