

STEEL IRON SHIP.

20th April 1882 5678

Date, First Survey 2 June 1881

Last Survey 14 April 1882

1882

Survey held at *Dumbarton*

On the *Twin Screw Steamer "Makinapua"*

TONNAGE under Tonnage Deck 386.17

Net Tonnage 3.44

Ditto of Poop, or Raised Or. Dk. 22.05

Ditto of Houses on Deck 11.71

Tonnage of Forecastle 423.37

Crew Space 29.076

Engine Room 394.31

Master Tonnage 189.56

out on Beam 204.75

ONE, ~~DECKED~~ DECKED VESSEL, ~~MADE ON AWNING DECKED VESSEL.~~

Half Breadth (moulded) 13.42

Depth from upper part of Keel to top of Upper Deck Beams 13.85

Girth of Half Midship Frame (as per Rule) 24.62

1st Number 51.89

1st Number, if a 3-Decked Vessel .. deduct 7 feet 158.91

Length 82.45

2nd Number 5.92

Proportions— Breadths to Length .. 11.41

Depths to Length—Upper Deck to Keel ..

Main Deck ditto ..

Master *Jones*

Built at *Dumbarton*

When built 1881-82 Launched 31 Dec 1881

By whom built *Wm Denny & Bros*

Owners *Union S.S. Co of N. Zealand*

Residence *Dunedin*

Port belonging to *Dunedin*

Destined Voyage ..

If Surveyed while Building, Afloat, or in Dry Dock. *While Building & Afloat*

LENGTH	Feet.	Inches.	BREADTH—	Feet.	Inches.	DEPTH top of Floors to Upper Deck Beams	Feet.	Inches.	Power of Engines	Horse.	No. of Decks with flat laid	No. of Tiers of Beams
Length per Rule	58	11	Moulded	26	10	Do. do. Main Deck Beams	12	7 1/2	80	80	one	one
Dimensions of Ship per Register, length,	160		breadth,	26.85		depth,	12.6					
KEEL, depth and thickness	Flat		Inches in Ship		Inches per Rule		app. md. flc					
PLATE, moulding and thickness	6 1/2 x 1 7/8		6 1/2 x 1 7/8		6 1/2 x 1 7/8		6 1/2 x 1 7/8					
STERN-POST for Rudder do. do.	6 1/2 x 2 1/4		6 1/2 x 2 1/4		6 1/2 x 1 7/8		6 1/2 x 1 7/8					
" " for Propeller	21 ins		21 ins		21 ins		21 ins					
Distance of Frames from moulding edge to moulding edge, all fore and aft	21 ins		21 ins		21 ins		21 ins					
FRAMES, Angle Iron, for 1/2 length amidships	3	3	10	3	3	10	3	3	10	3	3	10
Do. for 1/4 at each end	2 1/2	2 1/2	8	2 1/2	2 1/2	8	2 1/2	2 1/2	8	2 1/2	2 1/2	8
REVERSED FRAMES, Angle Iron	14 1/2	10	14 1/2	10	14 1/2	10	14 1/2	10	14 1/2	10	14 1/2	10
BOARDS, depth and thickness of Floor Plate at mid line for half length amidships	7 1/2		7 1/2		7 1/2		7 1/2					
thickness at the ends of vessel	29		29		29		29					
depth at 3/4 the half-bdth. as per Rule	6		6		6		6					
height extended at the Bilges	10		10		10		10					
BEAMS, Upper, Spar, or Awning Deck	2 1/2	2 1/2	8	2 1/2	2 1/2	8	2 1/2	2 1/2	8	2 1/2	2 1/2	8
Single or double Angle Iron on Upper edge	42 ins		42 ins		42 ins		42 ins					
Average space	42 ins		42 ins		42 ins		42 ins					
BEAMS, Main, or Middle Deck	5	3	10	5	3	10	5	3	10	5	3	10
Single or double Angle Iron on Upper Edge	42 ins		42 ins		42 ins		42 ins					
Average space	42 ins		42 ins		42 ins		42 ins					
BEAMS, Hold, or Orlop	8	12	8	12	8	12	8	12	8	12	8	12
Single or double Angle Iron on Upper Edge	7		7		7		7					
Average space	7		7		7		7					
KEELSONS Centre line, single or double plate, bonnet or Intercoastal, Plates	3 1/2	3	10	3 1/2	3	10	3 1/2	3	10	3 1/2	3	10
" Rider Plate	3 1/2		3 1/2		3 1/2		3 1/2					
" Bulb Plate to Intercoastal Keelson	3 1/2		3 1/2		3 1/2		3 1/2					
" Angle Irons	3 1/2		3 1/2		3 1/2		3 1/2					
" Double Angle Iron Side Keelson	3 1/2		3 1/2		3 1/2		3 1/2					
" Side Intercoastal Plate	3 1/2		3 1/2		3 1/2		3 1/2					
" do. one Angle Iron	3 1/2		3 1/2		3 1/2		3 1/2					
" Attached to outside plating with angle iron	2 1/2		2 1/2		2 1/2		2 1/2					
BULGE Angle Irons	3 1/2		3 1/2		3 1/2		3 1/2					
" do. Bulb Iron	3 1/2		3 1/2		3 1/2		3 1/2					
" do. Intercoastal plates riveted to plating for 1/2 length	6		6		6		6					
BULGE STRINGER Angle Irons	3 1/2		3 1/2		3 1/2		3 1/2					
" Intercoastal plates riveted to plating for 1/2 length	3 1/2		3 1/2		3 1/2		3 1/2					
BE STRINGER Angle Irons	3 1/2		3 1/2		3 1/2		3 1/2					

FRAMES extend in one length from *middle line* to *gunwale* Riveted through plates with *3/4* in. Rivets, about *5 1/2* apart.

REVERSED ANGLE IRONS on floors and frames extend from *middle line* to *upper part of Bilge* and to *gunwale* alternately

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

Garboard, double riveted to Keel, with rivets *7/8* 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 *3/4* in. diameter, averaging *3* ins. from centre to centre.

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

Butts of *all outside plating* for *1/2* length, *double* riveted with Butt Straps *3/32* thicker than the plates they connect. *4* at into *7/8* thicker

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

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *3/4* in. diameter, averaging *3* ins. from cr. to cr.

Edges of Main Sheerstrake, *double or single* riveted. Upper Sheerstrake, *double* riveted.

Butts of Upper *or Spar* Sheerstrake, *double* riveted *whole* length amidships.

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

Butts of Main Stringer Plate, *double* riveted for *1/2* length amidships.

Breadth of laps of plating in double riveting *5 1/4* Breadth of laps of plating in single riveting *2 1/2*

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *double* No. of Breasthooks, *3* Crutches, *dup floors*

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *"Hall'side", "Dalziel"*

Manufacturer's name or trade mark, *and "Grossend"*

The above is a correct description. *Wm Denny & Bros* Surveyor's Signature, *J. Dodd* Surveyor to Lloyd's Register of British and Foreign Shipping.

Builder's Signature, *Wm Denny & Bros*

State clearly where plating is of alternate thicknesses—as distinguished from diminished thickness at ends of vessel.

* If Iron Decking is fitted thereon.

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed* 5678 2/3
 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.*

Masts, Bowsprit, Yards, &c., are *of Pine* 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 *There are two Pole masts of P. Pine.*

No.	SAILS.	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.		No.	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested & Suprntd.
							Bower Anchors	Stream Anchor					
	CABLES, &c.	89-5/4	1 7/8	20.3	165-1/8		Bower Anchors	1	8.2.13	10-15-0-0	8 1/2 cwt.	<i>W. K. S. Sutherland</i> by E. Sutherland	
	Chain	75-1/4	1 7/8	30.4			(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	1	1.2.19		total		
	Fore Sails,	22 Aug 1881		18.6.15		<i>Tested by signature of D. G. Jones</i>	all	1	1.2.25	10-12-2-0	23 1/2		
	Fore Top Sails,	60	1 1/8	11.25	60-1/8		31 Aug 1881		1	7.0.0	9.5.0.0		
	Fore Topmast Stay Sails,	5 Sep 1881							1	2.2.17	5.5.0.0		2 1/2
	Main Sails,	75	8"	75-7/2				Stream Anchor	1	1.2.15			1 1/4
	Main Top Sails,	190	5"	90.5 1/2				Kedge					
	and	190	5"					2nd Kedge					
	quality	good											
	Standing and Running Rigging	Wire thumps											
	The Windlass is	Paul's Patent											
	Engine Room Skylights.	How constructed?	2 small skylights in deck on Bridge.										
	Coal Bunker Openings.	How constructed?	Cast Iron										
	Scuppers, &c.	How constructed?	open bulwarks										
	Cargo Hatchways.	How formed?	As usual										
	State size Main Hatch	14 ft x 9 ft											
	If of extraordinary size, state how framed and secured?												
	What arrangement for shifting beams?												
	Hatches, if strong and efficient?												
	Order for Special Survey No. 1548												
	Date 26 Feb 1881												
	Order for Ordinary Survey No. 1												
	Date												
	No. 253 in builder's yard.												

Standing and Running Rigging *Wire thumps* sufficient in size and *good* in quality. She has *one* Long Boat and *3* others
 The Windlass is *Paul's Patent* Capstan *good* and Rudder *good* Pumps *good*
 Engine Room Skylights. How constructed? *2 small skylights in deck on Bridge.* How secured in ordinary weather? *Bolted*
 What arrangements for deadlights in bad weather? *gratings & Carpanlino*
 Coal Bunker Openings. How constructed? *Cast Iron* How are lids secured? *snibs* Height above deck? *flush*
 Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *open bulwarks*

Cargo Hatchways. How formed? *As usual*
 State size Main Hatch *14 ft x 9 ft* Forehatch *13' 6" x 9 ft* Quarterhatch *✓*
 If of extraordinary size, state how framed and secured? *not of an extraordinary size*
 What arrangement for shifting beams?
 Hatches, if strong and efficient? *Yes.*

Order for Special Survey No. 1548
 Date 26 Feb 1881
 Order for Ordinary Survey No. 1
 Date
 No. 253 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 *Specially Surveyed: - June 2, 6, 16, 20, 23, 27; July 5, 9, 15, 20, 28; Aug 4, 10, 11, 15, 18, 22, 29; Sep 9, 12; Oct 3, 7, 14, 17, 25, 27; Nov 1, 7, 10, 14, 18, 22, 24, 28; Dec 1, 12, 16, 23, 27, 28; 1882: Jan 9, 12, 17, 18, 23, 26, 30; Feb 2, 14, 23; Mar 6, 16, 22, 29;*
 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..
 5th. After the ship was launched and equipped

General Remarks (State quality of workmanship, &c.) *April 3/10. 1/4*

The workmanship in this vessel is good, and she is built in accordance with the approved tracings, 5 in number, attached herewith, and with the instructions contained in the Secretary's letters of the 27th Jan'y, 25 Mar. and 25 Nov. 1881. The steel works, as set forth in the Circulars issued by the Committee of which she is built, was tested at the Manufacturers' Works, as set forth in the Circulars issued by the Committee. She has a fore peak ballast tank, containing 12 1/2 Tons of water, and a ballast tank aft around tunnels 17 1/2 ft long and containing 28 Tons of water; each of these tanks have been tested as required by the Rules. After launching this vessel was lifted on to a Quay in Builder's Yard, by a high tide which occurred on the 5th Jan. 1882. After being raised on blocks, a thorough examination was made, and two very slight indentations between frames, at Bilges, and one under bottom were found, but otherwise she sustained no damage, and was again successfully launched on the 22 Jan'y 1882. House aft 19 x 8 1/2. Open Bridge house 20 ft long, Deck fore-castle 21 ft with side houses abt. 5 1/2 ft long.

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.)
 How are the surfaces preserved from oxidation? Inside *Cement & Paint* Outside *Paint*

I am of opinion this Vessel should be Classed *100 A.1.*
 The amount of the Entry Fee ... £ 4: 0: 0 is received by me,
 Special ... £ 19: 14: 0 10th April 1882
 Certificate ... 0: 0: 0
 (Travelling Expenses, if any, £)
 Committee's Minute *Friday, April, 21st. 1882.*
 Character assigned *100 A.1*
 Surveyor to Lloyd's Register of British and Foreign Shipping.
 It is submitted that the vessel appears eligible to be classed as 100 A.1.
 100 A.1 Foundation