STEEL ~~IRON~~ SHIP.

RECEIVED 30th MAR. 82 5657

No. 5657 Survey held at Dumbarton Date, First Survey 8th April 1881 Last Survey 20th March 1882

On the S.S. "Manapouri" 2 Masts. Schooner rigged

TONNAGE under Tonnage Deck	1565.15	~~ONE, OR TWO DECKED~~, THREE DECKED VESSEL, ~~SPAR, OR AWNING DECKED VESSEL.~~	Feet.	Master	Thos. Logan
Ditto of Third, Spar, or Awning Deck		Half Breadth (moulded)	18.00	Built at	Dumbarton
Ditto of Poop, ~~Raised Qr. Dk.~~	98.46	Depth from upper part of Keel to top of Upper Deck Beams	25.60	When built 1881-82	Launched 20 Dec. 1881
Ditto of Houses on Deck	76.59	Girth of Half Midship Frame (as per Rule)	39.25	By whom built	Denny & Bros.
Ditto of Forecastle	43.16	1st Number	82.85	Owners	Union S.S. Co. of New Zealand
Gross Tonnage	1783.36	1st Number, if a 3 Decked Vessel deduct 7 feet	7.00	Residence	Dunedin
Less Crew Space	103.82		75.85	Port belonging to	Dunedin
	1679.54	Length	283.33		
Less Engine Room	559.52	2nd Number	21490	Destined Voyage	Melbourne
Register Tonnage as cut on Beam	1020.02	Proportions— Breadths to Length	7.87	If Surveyed while Building, Afloat, or in Dry Dock.	While Building & Afloat
		Depths to Length—Upper Deck to Keel	11.06		
		Main Deck ditto	16.09		

PLANS

LENGTH on deck as per Rule	Feet. 283	Inches. 4	BREADTH— Moulded	Feet. 36	Inches. 0	DEPTH top of Floors to Upper Deck Beams / Do. do. Main Deck Beams	Feet. 23 / 15	Inches. 6 / 6	Power of Engines	Horse. 300

No. of Decks with flat laid 3
No. of Tiers of Beams 3

Dimensions of Ship per Register, length, 285.2 breadth, 36.3 depth, 23.7

	Inches in Ship.			Inches per Rule.		
				& app^d. M. Sec		
KEEL, depth and thickness						
STEM, moulding and thickness	9 × 2 6/8			9 × 2½		
STERN-POST for Rudder do. do.	10 × 5			10 × 5		
" " for Propeller						
Distance of Frames from moulding edge to moulding edge, all fore and aft	24 ins			24 ins		
				(Class 100A)		
	Inches. In Ship.	Inches. In Ship.	32ths. In Ship	Inches per Rule	Inches per Rule	32ths per Rule
				& app^d. M. Sec		
FRAMES, Angle Iron, for ⅗ length amidships	5	3	13	5	3	13
~~Do. for ⅕ at each end~~ In cellular bottom	3 / 5	3 / 3½	12 / 16	3 / 5	3 / 3½	12 / 16
REVERSED FRAMES, Angle Iron	3	3	12	3	3	12
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	23½		16	23½		16
thickness at the ~~ends of vessel~~ Dou. bottom			10			10
depth at ¾ the half-bdth. as per Rule			10			10
height extended at the Bilges	47			47		
BEAMS, Upper, ~~Spar, or Awning~~ Deck ~~Single or d'ble~~ Ang. ~~Iron, Plate or~~ Tee Bulb ~~Iron~~	7½		12	7½		12
~~Single or double Angle Iron on Upper edge~~						
Average space	48 ins			48 ins		
BEAMS, ~~Main, or~~ Middle Deck ~~Single or d'ble Ang. Iron, Plate or~~ Tee Bulb ~~Iron~~	8½		13	8½		13
~~Single, or double Angle Iron, on Upper Edge~~						
Average space	48 ins			48 ins		
BEAMS, Lower Deck— ~~Single or d'ble~~ Ang. ~~Iron, Plate or~~ Tee Bulb ~~Iron~~	7½		12	7½		12
~~Single or double Angle Iron on Upper Edge~~						
Average space	48 ins			48 ins		
~~BEAMS, Hold, or Orlop~~ ~~Single or d'ble Ang. Iron, Plate or Tee Bulb Iron~~						
~~Single or double Angle Iron on Upper Edge~~						
~~Average space~~						
KEELSONS Centre line, single ~~or double~~ plate, and ~~box~~, ~~or~~ Intercostal, Plates	21½		15 / 15	21½		15 / 15
Rider Plate	12		18	12		18
~~Bulb Plate to Intercostal Keelson~~ & Cellular bottom system						
" Angle Irons	5½	4	15	5½	4	15
" Double Angle Iron Side Keelson	5½	4	15 / 13	5½	4	15 / 13
" Side Intercostal Plate do. ~~Angle Irons~~ Bulb	8½		13	8½		13
Attached to outside plating with angle ~~iron~~	3	3	11	3	3	11
BILGE Angle Irons	5½	4	15	5½	4	15
" do. Bulb ~~Iron~~	8½		13	8½		13
" do. Intercostal plates riveted to plating for Boiler space length			13			13
BILGE STRINGER Angle Irons	5½	4	15	5½	4	15
Intercostal plates riveted to plating for Boiler space length			13			13

	Inches. In Ship.	32ths. In Ship.	Inches. per Rule	32ths. per Rule
			& app^d. mid. Sec.	
Flat Keel Plates, breadth and thickness	36	26	36	26
PLATES in Garboard Strakes, br'dth & thickness	36	20	36	20
" From Garboard to upper part of Bilges		16 & 13		16 & 13
" ~~Of d'bling at Bilge, or increased thickness and length applied~~	&	18 & 15 / 16 & 13		18 & 15 / 16 & 13
" From up. prt of Bilge to lr. edge of Sh'rstrake	&	18 & 15		18 & 15
" ~~Main Sheerstrake, breadth and thickness~~				
" Of d'blng at ~~Sh'stk. & lng. applied~~ Main Dk for 210 ft	32 ×	8/16 &	7/16	Dou.
" ~~From M'n. to Upr. or Spar Dk. Sh'rstrake~~	7 48	23 & 16		
" Up. ~~or Spar~~ Dk Sh'rstrake, brdth & thickn'ss	Doubling 10 ×	21/32	as app^d.	
Butt Straps to outside plating, breadth & thickness	19 & 9¾	26 & 13	19 & 9¾	26.13
Lengths of Plating	7 frame spaces			
Shifts of Plating, and Stringers	2 — " — " —			
Gunwale Plate on ends of ~~Awning, Spar, or~~ Upper Deck Beams, breadth and thickness	40½	15	40½	15
Angle ~~Iron~~ on ditto	4 × 4 × 15		4 × 4 × 15	
Tie Plates fore and aft, outside Hatchways / Diagonal Tie Plates on Beams No. of Pairs / Flat of Up., Spar, or Awning Dk.*	Complete Steel deck 10-8/32 covered with Teak			
How fastened to Beams	Riveted.			
Stringer Plate on ends of ~~Main or~~ Middle Deck Beams, breadth and thickness	56	16	56	16
Is the Stringer Plate attached to the outside plating?	Yes		Yes	
Angle Irons on ditto, No. 2	4 × 4 × 15		4 × 4 × 15	
Tie Plates, outside Hatchways	14	16	14	16
~~Diagonal Tie Plates on Beams, No. of pairs~~				
Flat of Middle Deck* do. do.	3½	Pine	3½	
How fastened to Beams nut & screw bolts				
Stringer Plates on ends of Lower Deck, ~~Hold or Orlop~~ Beams	37	15	37	15
Is the Stringer Plate attached to the outside plating?	Yes		Yes	
Angle Irons on ditto, No. 2	4 × 4 × 15		4 × 4 × 15	
Stringer or Tie Plates, outside Hatchways	14	16	14	16
Flat of Lower Deck*	2½	Pine	2½	
Ceiling betwixt Decks, thickness and material	sparring			
" in hold do. do.	2½		2½	
Main piece of Rudder, diameter at head	7⅞			7⅞
do. at heel		3¾	3¾	
Can the Rudder be unshipped afloat?	Yes			
Bulkheads No. 5 No. per Rule 4				

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

* If Iron Deck, state if whole or part, and if wood deck is laid thereon.

" Thickness of 10-8/32
" Height up Collision ½ up. Dk, 4 to main Dk with W.T. flat abaft after BH at lower deck.
" How secured to sides of ship Double angle steels
" Size of Vertical Angle ~~Irons~~ 3 × 3 × 6/16 and distance apart 30 ins.
" Are the outside Plates doubled two spaces of Frames in length? Yes

SIDE STRINGER ~~Angle Irons~~ Intercostal in Boiler space

The FRAMES extend in one length from middle line to gunwale in cellular bottom and from Bilge & Bilge and Bilge to gunwale. Riveted through plates with 7/8 in. Rivets, about 6 to 7" apart.

The REVERSED ANGLE IRONS on floors and frames extend from middle line to upper Dk in E & B. space and to main & up. Dks 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 Steel 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 Steel rivets 7/8 in. diameter, averaging 3½ ins. from centre to centre.

" Butts from Keel to turn of Bilge, worked carvel, double riveted; with " rivets 7/8 in. diameter averaging 3½ ins. from centre to centre.

" Butts of all Strakes ~~at Bilge~~ for ½ 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 3½ ins. from cr. to cr.

" Butts from Bilge to Main Sheerstrake, worked carvel, treble riveted; with rivets 7/8 in. diameter, averaging 3½ ins. from cr. to cr.

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

" ~~Butts of Main Sheerstrake, treble riveted for length amidships.~~ Butts of Upper ~~or Spar~~ Sheerstrake, treble riveted ½ length amidships.

" Butts of Main Stringer Plate, treble riveted for ½ length amidships. Butts of Upper ~~or Spar~~ Stringer Plate, treble riveted for ½ length.

" Breadth of laps of plating in double riveting 6" & 5¾ Breadth of laps of plating in single riveting

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Tre. & dou. No. of Breasthooks, 4 Crutches, 3

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? "Dalziel" "Butterly" "Mossend"

Manufacturer's name or trade mark, "Landore" & "Hallside"

The above is a correct description.

Builder's Signature, Wm. Denny & Bros. Surveyor's Signature, J. Dodd

Surveyor to Lloyd's Register of British and Foreign Shipping.

565 ?

Workmanship. Are the butts of plating planed or otherwise fitted? Planed

Do the edges of the carvel work and of the butts fay 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 Steel 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 masts, built in accordance with the approved sketch herewith, see Secretary's letter of the 27th May 1881.

NUMBER for EQUIPMENT 25820

SAILS. N°.		CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntdt.	ANCHORS.	N°.	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested & Suprntdt.
One Suit	Fore Sails,	Chain (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendant.)	134.4½ / 135.1½ / 30 & 31 Dec. 1881	2"	72 / 1088	270 y / 1 13/16	Sekerton G. D. G. Lewis	Bower Anchors (State Machine where Tested, Date, or No. of Certificate, & Name of Superintendant.) 17, 29 & 31 Dec./81	1	36.2.2 / 7.2.2	33.10.1.7	32 cwt.	Sekerton by D. G. Lewis
	Fore Top Sails,								1	34.2.19 / 7.1.21	32.3.3.0	collective	
		Iron Stream Chain or Steel Wire or Hempen Strm Cable	75 / 4 Jan. 1882	1⅛	22.75 / 34.1	75 y / 1 1/8			1	30.3.4 / 6.1.8	29.8.2.14	weight 91¼ cwt.	
	Fore Topmast Stay Sails,								1	10.2.6 / 2.1.16	12.10.3.21	10½	
		Towline, Hemp. or Steel Wire	90 / 90	12" / 3" steel	90 / 90	12 / 9½			1	5.1.11 / 1.1.9	7.14.0.7	8¼	
	Main Sails,	Hawser	Certificate produced		90	7½		Stream Anchor	1	2.2.6 / 3.15	5.2.2.0	2½	
	Main Top Sails,	Warp	90	7½				Kedge					
	and spare	quality good	90	6	& 90.5			2nd Kedge					

Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has 3 Long Boat and 3 others

The Windlass is Paul's Patent Capstan good and Rudder good Pumps good

Engine Room Skylights.—How constructed? Teak on Iron Coamings How secured in ordinary weather? Bolted

What arrangements for deadlights in bad weather? Rods and Tarpaulins

Coal Bunker Openings.—How constructed? Cast Iron How are lids secured? Bayonet fixing Height above deck? flush

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? 8 water ports, 3 mooring pipes, 2 cargo ports, 3 gangway ports and 6 scuppers.

Cargo Hatchways.—How formed? As usual

State size **Main Hatch** 11'9" × 10' Forehatch 11½ × 10' Quarterhatch —

If of extraordinary size, state how framed and secured? not of extraordinary size

What arrangement for shifting beams? None

Hatches, If strong and efficient? Yes.

Order for Special Survey No. 1569 Date 5th Feb 1881

Order for Ordinary Survey No. — Date —

No. 252 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
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

Specially Surveyed:– 1881:– April 8, 11, 14, 18, 21, 28; May 3, 9, 12, 16, 20, 23, 30; June 2, 6, 9, 14, 16, 20, 23, 27; July 5, 9, 15, 28; Aug. 4, 8, 11, 15, 18, 22, 29; Sep. 9, 12; Oct. 3, 7, 10, 14, 17, 25, 27; Nov. 1, 7, 10, 14, 18, 22, 24, 28; Dec. 1, 5, 8, 12, 14, 16, 19, 23, 29. 1882:– Jan. 9, 12, 18, 23, 30; Feb. 9, 14, 16, 20, 23; Mar. 1, 2, 6, 16 & 20.

General Remarks (State quality of workmanship, &c.) The workmanship in this vessel is good and she is built in accordance with the approved tracings, 7 in No., attached herewith, and in accordance with the Secretary's letters of the 2nd & 9th Dec. 1880, 14th & 21st Jany, 5th Mar, 12th April and 27th May 1881 & 6 Oct 1881. The steel of which this vessel has been built, was tested at the Manufacturers' Works, as set forth in the Circulars issued by the Committee.

She is built on the cellular principle except in the boiler space, that before is divided into two compartments and is 114 ft long containing 183 tons of water, that abaft is also in two compartments, 90 ft long containing 150 tons of water. She also has a fore peak tank containing 35 tons. All these tanks were tested to a head of water as required by the Rules. The Poop is 56 ft long, the Bridge is 44 ft long, and a shade deck, with open sides, before the Bridge 42 ft and abaft the Bridge 28 ft, with casings around engine & boiler hatchways and houses at middle line 15 ft broad underneath. Forecastle 44 ft long.

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, forecastle, 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 A1 "Steel" "3 Dks & 3 tier Bms" "one steel Dk"

The amount of the Entry Fee ... ...£ 5: 0: 0 is received by me, 25 March 1882

Special ... ...£ 64: 0: 0

Certificate ... 0: 0: 0 (to be sent as per margin)

£ 72: 0: 0

(Travelling Expenses, if any, £ .)

Mob 1013

J. J. Dodd

Surveyor to Lloyd's Register of British and Foreign Shipping.

It is submitted that this vessel appears eligible to be classed as recommended viz 100 A1. Steel. 3 Dks. "Steel Dk"

Committee's Minute Friday, March. 31st. 18 82.

Character assigned ✠100 A1 Spar & Shade Dk. 3 Dks. Steel Dk

30/3/82