

STEEL SHIP

No. *1117* Survey held at *Dumbarton* Date, First Survey *11 Decr/84* Last Survey *30 Decr* 1884
On the *Steel S.S. "Dainui"* 4 masts.

TONNAGE under Tonnage Deck *3013.81*
Ditto of Third, Spar, or Awning Deck *1117.45*
Ditto of Poop, or Main Deck *192.04*
Ditto of Houses on Deck *894.94*
Ditto of Forecastle *84.97*
Gross Tonnage *5030.73*
Less Crew Space *189.96*
Net Tonnage *4840.77*
Less Engine Room *1609.83*
Register Tonnage as cut on Beam *2230.94*

ONE, OR TWO DECKED, THREE DECKED VESSEL, *ONE*
Half Breadth (moulded) *23.00*
Depth from upper part of Keel to top of Upper Deck Beams *38.16*
Girth of Half Midship Frame (as per Rule) *50.66*
1st Number *106.82*
1st Number, if a 3-Decked Vessel deduct 7 feet *7.00*
Length *99.82*
2nd Number *420.7*
Proportions— Breadths to Length *9.14*
Depths to Length— Upper Deck to Keel *12.6*
Main Deck ditto *16.6*

Master *Barlow*
Built at *Dumbarton*
When built *1883-84* Launched *8 Sepr/84*
By whom built *Wm Denny & Bros*
Owners *Shaw, Savill & Albion Co., Ltd.*
Residence *34 Lidenhall St. London E.C.*
Port belonging to *Glasgow*
Destined Voyage *London for N. Zealand*
If Surveyed while Building, Afloat, or in Dry Dock. *While Building & afloat.*

LENGTH on deck as per Rule *420* Feet. Inches. *8* BREADTH— Moulded *46* Feet. Inches. *0* DEPTH top of Floors to Upper Deck Beams *28* Feet. Inches. *11* Power of Engines *800* Horse. N° of Decks with flat laid *3* N° of Tiers of Beams *3*

Dimensions of Ship per Register, length *99.82* breadth *23.00* depth *38.16* DEPTH Moulded *21.6* Amidships *32.3* Fore & Aft *32.0*

KEEL, depth and thickness *2 side Bars Iron 10 x 1 1/2*
STEM, moulding and thickness *Steel 12 x 3 1/2*
STERN-POST for Rudder do. do. *Steel 12 x 8*
" " for Propeller *12 x 8*
Distance of Frames from moulding edge to moulding edge, all fore and aft *24 ins*

FRAMES, Angle Iron, for 1/2 length amidships *4 1/2 x 3 1/2*
Do. for 1/4 at each end *side for 6 x 3 1/2*
REVERSED FRAMES, Angle Iron *4 1/2 x 3 1/2*
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships *Brackets 12*
" thickness at the ends of vessel *According to app. 3*
" depth at 1/4 the half-bdth. as per Rule *Sketch of mid. sec.*
" height extended at the Bilges *Sketch of mid. sec.*

BEAMS, Upper, Spar, or Awning Deck Single or double Angle Iron, Plate or Tee Bulb Iron *9 1/2 16 9 1/2 16*
Single or double Angle Iron on Upper edge *48 ins 48 ins*
Average space *10 16 10 16*
BEAMS, Main, or Middle Deck Single or double Angle Iron, Plate or Tee Bulb Iron *10 16 10 16*
Single or double Angle Iron on Upper edge *48 ins 48 ins*
Average space *10 16 10 16*
BEAMS, Lower Deck Single or double Angle Iron, Plate or Tee Bulb Iron *10 16 10 16*
Single or double Angle Iron on Upper edge *48 ins 48 ins*
Average space *10 16 10 16*
BEAMS, Hold, or Orlop Single or double Angle Iron, Plate or Tee Bulb Iron *10 16 10 16*
Single or double Angle Iron on Upper edge *48 ins 48 ins*
Average space *10 16 10 16*

KEELSONS Centre line, single or double plate, box, or intercostal plates *61 16 61 16*
" Rider Plate *42 16 42 16*
" Bulb Plate to intercostal keelson *4 4 15 4 4 15*
" Angle Irons *3 1/2 3 1/2 13 3 1/2 3 1/2 13*
" Double Angle Iron Side Keelson *3 1/2 3 1/2 13 3 1/2 3 1/2 13*
" 3 Side Intercostal Plate *girders*
" do. Angle Irons *3 1/2 3 1/2 13 3 1/2 3 1/2 13*
" Attached to outside plating with angle iron *Cellular double*

BILGE Angle Irons *Cellular double*
" do. Bulb Iron *bottom principle of construction*
" do. Intercostal plates riveted to plating for length *6 1/2 4 1/2 16 6 1/2 4 1/2 16*

BILGE STRINGER Angle Irons *6 1/2 4 1/2 16 6 1/2 4 1/2 16*
Intercostal plates riveted to plating for 3/5 length *15 15*

SIDE STRINGER Angle Irons *6 1/2 4 1/2 16 6 1/2 4 1/2 16*

The FRAMES extend in one length from *Bilge to Bilge & from Bilge to gunwale*
The REVERSED ANGLE IRONS on floors and frames extend from middle line to *Bilge from B. to up. St. for and 1/2 L. from Midship*
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 1/4* in. diameter, averaging *5 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 *4 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 all Strakes at Bilge for *whole* length, treble riveted with Butt Straps *saib* 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 or single riveted. Upper Sheerstrake, double or single riveted.
" Butts of Main Sheerstrake, treble riveted for *whole* 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 *6* Breadth of laps of plating in single riveting *6*

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Yes & don.* No. of Breasthooks, *6* Crutches, *2 up floors*
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *"Parkhead", "Grosvenor", "Hallside", "Goats" & "Butterfly No. 1"*
Manufacturer's name or trade mark, *"Hallside", "Goats" & "Butterfly No. 1"*
The above is a correct description *Yes*
Builder's Signature, *Wm Denny & Bros* Surveyor's Signature, *J. B. Denny*
Surveyor to Lloyd's Register of British and Foreign Shipping.

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.

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? *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 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 *The masts & bowsprit have been constructed in accordance with the approved tracing and the Secy's letter of the 5th Dec 1883.*

The steel used: Messrs. All steel tested at the Manufacturers Works by the officers to this Society.

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Suprntd.
SAILS.												
N ^o .	CABLES, &c.											
	Chain	150	2 1/2	12 1/2	300							
	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	150	2 1/2	9 1/8	2 1/2	Chert						
Fore Sails,	Iron Stream Chain	40	1 1/2	4 1/2	90	1 1/2						
Fore Top Sails,	or Steel Wire	90	1 1/2	4 1/2	90	1 1/2						
Fore Topmast Stay Sails,	or Hempen Strm Cable	40	1 1/2	4 1/2	90	1 1/2						
Main Sails,	Towline, Hemp.	120	4 3/4	stul	120	4 3/4						
Main Top Sails,	or Steel Wire	Cent.	per dwd									
and spare	Hawser	90	12	150	6	90						
	Warp	90	10	90	4	90						
	quality	90	4	colls	7	90						

Standing and Running Rigging *Five pumps* sufficient in size and *90* in quality. She has *5* Long Boat and *2* others

The Windlass is *Pauls Patent* Capstan *good* and Rudder *90* Pumps *good* *Steam launch*

Engine Room Skylights. How constructed? *Iron on iron Coaming* How secured in ordinary weather? *Bolts*

What arrangements for deadlights in bad weather? *Iron covers with Bullyes*

Coal Bunker Openings. How constructed? *Through sides of hull* How are lids secured? *Bars* Height above deck? *✓*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *4 Scuppers, 8 water ports and one moving pipe*

Cargo Hatchways. How formed? *As usual plate & angle*

State size Main Hatch *2-19'9" x 12ft* Forehatch *9'9" x 10ft* Quarterhatch *11'10" x 10ft*

If of extraordinary size, state how framed and secured? *one shifting web and three fore & afters*

What arrangement for shifting beams? *3 in large hatchways.*

Hatches, If strong and efficient? *Yes*

Order for Special Survey No. *1903* 1st. On the several parts of the frame, when in place, and before the plating was wrought *Specially Surveyed:- 11/18:- Dec 11, 14, 18, 21, 25;*
Date *23rd Oct 83* 2nd. On the plating during the process of riveting *10/4:- Jan 8, 15, 18, 22, 25, 30; Feb 5, 8, 15, 19, 22, 26, 29; Mar 4, 7, 11, 14, 18, 21, 25; April 7, 14, 18, 22, 25, 30; May 2, 6, 15, 18, 22, 27, 30;*
Order for Ordinary Survey No. *283* 3rd. When the beams were in and fastened, and before the decks were laid... *June 3, 10, 13, 17, 20, 24, 27; July 4, 10, 15, 29, 31; Aug 5, 7, 11, 12, 15;*
Date *283* 4th. When the ship was complete, and before the plating was finally coated or cemented... *12/6, 19, 20, 22, 26, 29; Dec 2, 5, 9, 12, 16, 20, 23, 26, 30; Oct 3, 7, 11;*
No. *283* in builder's yard. 5th. After the ship was launched and equipped *12/6, 19, 20, 22, 26, 29; Dec 2, 5, 9, 12, 16, 20, 23, 26, 30; Oct 3, 7, 11;*
State dates of letters respecting this case *1/18 Oct; 1 Nov; 5 & 30 Dec 1883; 4 & 20 Feb 1884; 2, 25; Nov. 5, 11, 14, 18, 21, 25; 28; Dec 3, 5, 16, 19, 24 & 30.*

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

The workmanship is good, and the vessel has been built in accordance with the six approved tracings attached herewith, and with the instructions contained in the letters above referred to, and otherwise in accordance with the Rules. She is a sister vessel to the S. S. "Orawa", Glasgow Report N^o 6694, and like her she has a double bottom 366ft long, built on the cellular principle. And it is divided into 7 compartments, N^o 1 tank from aft is 46ft long & contains 58.6 tons of water; N^o 2:- 46ft. & 91.4 tons; N^o 3:- 62ft. & 108 tons; N^o 4:- 56ft. & 77.2 tons; N^o 5:- 58ft. & 165 1/2; N^o 6:- 48ft. & 106 1/2 tons, and N^o 7:- 52ft. & 54 tons, making a total of 829.5 tons. Each of these tanks was tested as required by the Rules & found satisfactory. The fore & after peaks were also filled with water & found satisfactory.

Forecastle 48ft & 10ft wings. Bridge 188ft fore end closed & after end has two W.T. swing doors. Poop:- 64ft. & 8ft wings

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 *Portland Cement* Outside *Paint*

I am of opinion this Vessel should be Classed *100 A.1.*

The amount of the Entry Fee£ *5* is received by me, *J. Dodd*

Special£ *140* : *6* 15/11 1883

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

(Travelling Expenses, if any, £ ...)

Committee's Minute

Character assigned

100 A.1. Steel

3 Dms 2 others

J. Dodd

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