

STEEL IRON SHIP.

8524

(Received at London) 17 MAY '88

No. 8524 Survey held at Paisley Date, First Survey 14th October 1887 Last Survey 28th April 1888
 On the Steel Screw Steamer "Grunner"

TONNAGE under Tonnage Deck	433.98
Excess of Deck, Spar, or Awning Deck	10.17
Ditto of Poop, or Raised Or. Dk.	47.50
Ditto of Houses on Deck	30.81
Ditto of Forecastle	18.01
Gross Tonnage	540.47
Less Crew Space	34.77
	505.70
Less Engine Room	177.95
Register Tonnage as cut on Beam	327.75

ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AWNING-DECKED VESSEL.

Half Breadth (moulded)	13.00
Depth from upper part of Keel to top of Upper Deck Beams	14.37
Girth of Half Midship Frame (as per Rule)	24.54
1st Number	57.91
1st Number, if a 3-Decked Vessel .. deduct 7 feet	
Length	170.91
2nd Number	8841.93
Proportions— Breadths to Length	6.5
Depths to Length— Upper Deck to Keel	11.8
Main Deck ditto	

Master — Highman 1888-1888
 Built at Paisley
 When built 1887-8 Launched 12th March '88
 By whom built J. McArthur & Co.
 Owners Martin Newmed
 Residence Dunedin
 Port belonging to Dunedin
 Destined Voyage New Zealand
 If Surveyed while Building, Afloat, or in Dry Dock.
Specially surveyed while building

LENGTH on deck as per Rule	Feet. 170	Inches. 11	BREADTH— Moulded	Feet. 26	Inches. 0	DEPTH top of Floors to Upper Deck Beams	Feet. 13	Inches. 2	Power of Engines	Horse. 95	Nº. of Decks with flat laid	one
						Do. do. Main Deck Beams					Nº. of Tiers of Beams	one

Dimensions of Ship per Register, length, 172.75 breadth, 26.1 depth, 13.15
 Depth moulded 13 1/10 ins

	Inches in Ship	Inches per Rule								
KEEL , depth and thickness	7/4 x 1 1/8	7/4 x 1 1/8	7/4 x 1 1/8	7/4 x 1 1/8	7/4 x 1 1/8	7/4 x 1 1/8	7/4 x 1 1/8	7/4 x 1 1/8	7/4 x 1 1/8	7/4 x 1 1/8
STEM , moulding and thickness	6 1/2 x 1 1/8	6 1/2 x 1 1/8	6 1/2 x 1 1/8	6 1/2 x 1 1/8	6 1/2 x 1 1/8	6 1/2 x 1 1/8	6 1/2 x 1 1/8	6 1/2 x 1 1/8	6 1/2 x 1 1/8	6 1/2 x 1 1/8
STERN-POST for Rudder do. do.	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4
" for Propeller	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4	6 1/2 x 3 3/4
Distance of Frames from moulding edge to moulding edge, all fore and aft	21"	21"	21"	21"	21"	21"	21"	21"	21"	21"
FRAMES , Angle Iron, for 2/3 length amidships	3	3	6	3	3	6	3	3	6	3
Do. for 1/3 at each end	3	3	5	3	3	5	3	3	5	3
REVERSED FRAMES , Angle Iron	2 1/2	2 1/2	5	2 1/2	2 1/2	5	2 1/2	2 1/2	5	2 1/2
FLOORS , depth and thickness of Floor Plate at mid line for half length amidships	1 1/4	1 1/4	6	1 1/4	1 1/4	6	1 1/4	1 1/4	6	1 1/4
thickness at the ends of vessel			5			5			5	
depth at 3/4 the half-bdth. as per Rule	7/4	7/4		7/4	7/4		7/4	7/4		7/4
height extended at the Bilges	29	29		29	29		29	29		29
Floors run straight across in double bottom										
BEAMS , Upper, Spar, or Awning Deck	5	3	6	5	3	6	5	3	6	5
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron										
Single or double Angle Iron on Upper edge										
Average space	21	21		21	21		21	21		21
BEAMS , Main, or Middle Deck										
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron										
Single or double Angle Iron on Upper Edge										
Average space										
BEAMS , Lower Deck										
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron										
Single or double Angle Iron on Upper Edge										
Average space										
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, box, or Intercostal, Plates	11	9		11	9		11	9		11
" Rider Plate	7 1/4	9		7 1/4	9		7 1/4	9		7 1/4
" Bulb Plate to Intercostal Keelson	3 1/2	3	6	3 1/2	3	6	3 1/2	3	6	3 1/2
" Angle Irons										
" Double Angle Iron Side Keelson										
" Side Intercostal Plate in 2/3 space	2 1/2	2 1/2	4	2 1/2	2 1/2	4	2 1/2	2 1/2	4	2 1/2
" do. Angle Irons in 2/3 space										
" Attached to outside plating with angle iron										
BILGE Angle Irons	3 1/2	3	6	3 1/2	3	6	3 1/2	3	6	3 1/2
" do. Bulb Iron										
" do. Intercostal plates riveted to plating for length										
BILGE STRINGER Angle Irons	3 1/2	3	6	3 1/2	3	6	3 1/2	3	6	3 1/2
Intercostal plates riveted to plating for length	3 1/2	3	6	3 1/2	3	6	3 1/2	3	6	3 1/2
SIDE STRINGER Angle Irons	4	3	8	4	3	8	4	3	8	4
" " Plate	10	8		10	8		10	8		10

The **FRAMES** extend in one length from Keel to Main Deck

The **REVERSED ANGLE IRONS** on floors and frames extend from middle line to Bilge Stringer and to Main Deck 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 ins. from centre to centre.

" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 2 5/8 ins. from centre to centre.

" Butts of Two Strakes at Bilge for 3/4 length, treble riveted with Butt Straps 2/20 thicker than the plates they connect.

" 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 2 5/8 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 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 length.

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

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble & double No. of Breasthooks, Three Crutches, Three

What description of **Iron** is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Siemans-Martin

Manufacturer's name or trade mark, Kallside, "Krossed", Parkhead, Dalzell, Hoats

The above is a correct description.

Builder's Signature, J. McArthur & Co. Surveyor's Signature, W. J. Lowther-Dutton

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

Form No. 1 for Iron Ship—30.

State clearly where plating is of alternate thicknesses or of varying thicknesses from diminished thickness at ends of vessel.

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

Planned

Workmanship.

Are the butts of plating planed or otherwise fitted?

- Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies?
Are the fillings between the ribs and plates solid single pieces?
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other?
Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces?
Do any rivets break into or through the seams or butts of the plating?

Yes

Yes
Yes
Yes

In one or two cases in butts only.

Masts, Bowsprit, Yards, &c., are of 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
Foremast 60' 0" - 2 plates in round, keel 11 1/2 diam x 7/32, deck 16 x 7/32, hounds 12 x 7/32, head 10 x 7/32.
Mainmast 53' 6" - 2 plates in round, keel 10 1/2 diam x 7/32, deck 14 x 7/32, hounds 10 1/2 x 7/32, head 9 x 6/32.
Double riveted landings; double and treble riveted butts. Straps 1/16" heavier.

Table with columns: NUMBER & LETTER for EQUIPMENT, SAILS, CABLES, &c., Fathoms, Inches, Test per Certificate, Inches per Rule, Machine where Tested and Superintendant, ANCHORS, N.º, Weight, Ex. Stock, Test per Certificate, W'ght req'd per Rule, Machine where Tested and Superintendant.

Standing and Running Rigging sufficient in size and good in quality. She has 200 22ft Long Boats and 1-22ft 9ft and 1-16ft Dinghy.
The Windlass is McOnies Steam Capstan Windlass, and Rudder Good Pumps to approved Plan.
Engine Room Skylights. How constructed? Of Teak. How secured in ordinary weather? Bolted to iron coamings 22" high on Bridge Deck.
Coal Bunker Openings. How constructed? Iron shutts. How are lids secured? from main to aft. Height above deck? Deck.
Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? On each side - 3 wash ports, 22" x 16", 23" x 17", and 24" x 18" respectively, 5 Scuppers and 2 mooring pipes.
Cargo Hatchways. How formed? Coamings and fore and afters - Coamings 34 1/2" x 7/16 - 3 1/2" at centre line.
State size Main Hatch 14' 6" x 13' 0" Forehatch 7' 0" x 6' 0" Quarterhatch 14' 6" x 12' 0"
If of extraordinary size, state how framed and secured?
What arrangement for shifting beams? One to main and one to Quarter Hatch - full depth and 3/16" thick.
Hatches, If strong and efficient? Yes, 2 1/2" soled.

Order for Special Survey No. 2124 Date 24th Oct 1887
Order for Ordinary Survey No. 48 Date 9th Nov 1887
No. 48 in builder's yard.
State dates of letters respecting this case 1887 - M. The Secretarys 20th October, 26th November, P 17th December.

General Remarks (State quality of workmanship, &c.)
The workmanship and materials are good and the vessel has been constructed in accordance with the Secretarys letters above referred to, the Midship Section forwarded 1st May 1888 and remaining approved Plans herewith altered where necessary to represent the vessel as actually built. The dimensions have been checked and found to give a lower numeral than approved. The collision bulk head at the upper part has been kept further back as shown on the longitudinal section. The double bottom forward and aft has been satisfactorily tested under pressure the fore peak filled, and the Rules in all other respects and the Committee's Circulars on Steel complied with. 3 Plans and 1 Forgings Report.
One Deck (Steel); one tier of beams.
Forecastle 24ft long, Bridge 43ft 9ins., Poop 28ft 0ins.

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 Paint and cement Outside Paint
I am of opinion this Vessel should be Classed "100 A 1. Steel"
The amount of the Entry Fee £ 3 : - : - is received by me, (Signature)
Special £ 25 : 0 : - 4/5 1888 (Signature)
Surveyor to Lloyd's Register of British and Foreign Shipping.
It is submitted that this vessel appears eligible to be classed "100 A 1. Steel" as recommended by the Committee.
Lloyd's Register of Shipping
Character assigned 100 A 1 Steel
+ Sm C 5788
Lack (Signature)
FRIDAY 18 MAY 1888
100 A 1 Steel
100k Steel
DB. Particulars appended (Signature)