

# ON SHIPS.

Rec 28/10/11

No. 6061 Survey held at Greenock

Date, First Survey 8th August

Last Survey 13th Nov 1871

On the Screw Steamer "Manda"

Master Wm. Bowers

Tonnage under Tonnage Deck 345.02  
 Ditto of Third Spar, or Awning Deck. 11.83  
 Ditto of Poop, or Raised Qr. Deck 11.83  
 Ditto of Houses 11.83  
 Ditto of Forecastle 356.85  
 Gross Tonnage 114.19  
 Crew Space, as per Rule 114.19  
 Register Tonnage, out on Beam 242.06  
 Engine Room 114.19  
 Register Tonnage, as a Steamer, out on Beam 242.06

ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.  
 Half moulded breadth 11.0  
 Depth from upper part of Keel to top of Upper Deck Beams 16.0  
 Girth of Half Midship Frame (as per Rule) 23.5  
 1st Number 50.5  
 Length 14.9  
 2nd Number 7524.8  
 Depths to Length over 9

THREE DECKED VESSELS.  
 Half Moulded Breadth 11.0  
 Total Depth if three or more Decks 16.0  
 Total Girth of Half Midship Frame 23.5  
 3rd Number 50.5  
 Length 14.9  
 4th Number 7524.8  
 Breadths to Length over 9

Built at Greenock  
 When built 1871 Launched 4th Nov 1871  
 By whom built Caird & Co  
 Owners North Western Ship Coasting Co  
 Port belonging to Greenock  
 Destined Voyage Glyde to Rangoon  
 If Surveyed while Building, Afloat, or in Dry Dock.

Length on deck as per Rule	Feet. Inches.	Moulded Breadth	Feet. Inches.	Depths from top of Floors to Upper and Main Deck Beams, as per Rule	Feet. Inches.	Power of Engines	Horse.	Nº. of Decks with flat laid	Nº. of Tiers of Beams
149		22		16		200	200	Two	Two

Dimensions of Ship per Register, length, 150 breadth, 22.3 depth, 14.9

	Inches in Ship	Inches required per Rule	16ths required per Rule	Inches in Ship	Inches required per Rule	16ths required per Rule
Keel, if bar iron, depth and thickness	5 x 1 1/2	7 1/2 x 1 1/2	16			
Do. if centre through plate, depth and thickness	5 x 1 1/2	6 1/2 x 1 1/2	16			
Stem, if bar iron, moulding and thickness	5 x 3	6 1/2 x 3	16			
Stern-post for Rudder do.						
Stern-post for Propeller						
Distance of Frames from moulding edge to moulding edge, all fore and aft	18	(Class 22)	16			
Frames, size of Angle Iron, for 1/2 length amidships	3 2 1/2	3 2 1/2	16			
Do. for 1/2 at each end	3 2 1/2	3 2 1/2	16			
Reversed Frames, size of Angle Iron	2 2	2 2	16			
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	12 5/8	13 1/2	16			
Do. at the ends	12 5/8	13 1/2	16			
Do. do. do. at Bilge Keelson	8 5/8	8 5/8	16			
Do. height extended at the Bilges	24 inches	27 inches	16			
Beams, Upper, Spar, or Awning Deck (No. single or double Angle Iron, Plate or Tee Bulb Iron)	4 3 1/2	5 1/2	16			
Single or double Angle Iron on Upper edge	36 inches	44 inches	16			
Average space						
Beams, Main or Middle Deck (No. single or double Angle Iron, Plate or Tee Bulb Iron)	3 1/2 3	5 1/2	16			
Single or double Angle Iron on Upper Edge	36 inches	44 inches	16			
Average space						
Beams, Lower Deck, Hold or Orlop (No. single or double Angle Iron, Plate or Tee Bulb Iron)	3 1/2 3	5 1/2	16			
Single or double Angle Iron on Upper Edge	36 inches	44 inches	16			
Average space						
Keelson Centre line, single or double plate, box, or Intercoastal, size of Plates	15 5/8	16 1/2	16			
Do. Bulb Plate to Intercoastal Keelson	4 3	3 1/2 3	16			
Do. Size of Angle Irons	4 3	3 1/2 3	16			
Do. Side Intercoastal Keelson, size of Plates	4 3	3 1/2 3	16			
Do. Angle Irons on tops of Floors	4 3	3 1/2 3	16			
Do. Bilge Keelson, Bulb Iron	4 3	3 1/2 3	16			
Do. do. Intercoastal plates riveted to plating for length	4 3	3 1/2 3	16			
Do. do. Angle Irons	4 3	3 1/2 3	16			
Side Stringers (No. size of Angle Irons)	4 3	3 1/2 3	16			
Do. Intercoastal plates riveted to plating for length						
Transoms, material <u>Iron</u> or, if none, in what manner compensated for.						
Knight-heads <u>Iron</u> Hawse Timbers <u>Iron</u>						
Windlass <u>Napier's patent</u> Pall Bitt <u>Iron</u>						
The Frames extend in one length from <u>Keel</u> to <u>Burnsall &amp; Co Iron moulding</u>						
The Reverse Angle Irons on the floors and frames extend <u>across</u> the middle line <u>to Burnsall &amp; Co Iron moulding</u> and to <u>Iron moulding</u> alternately						
Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u> And are their butts properly shifted? <u>Yes</u>						
Plates, Garboard, double or <u>single</u> Riveted to Keel, double or <u>single</u> at upper edge, with Rivets (1 1/4 in.) diameter, averaging (4 1/2 ins.) from centre to centre.						
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or <u>single</u> Riveted; with Rivets (3/4 in.) diameter, averaging (2 1/2 ins.) from centre to centre.						
Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (9 1/8) thick, double or <u>single</u> Riveted; with Rivets (3/4 in.) diameter averaging (2 1/2 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>No</u>						
Do. of Strakes at Bilge for <u>length</u> , treble riveted with Butt Straps <u>thicker</u> than their plates.						
Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece ( ) thick, or clencher, double or <u>single</u> riveted; with rivets (3/4 in.) diameter, averaging (2 1/2 ins.) from centre to centre.						
Do. Edges of Sheerstrake, Main, double or <u>single</u> Riveted. Upper, double or <u>single</u> Riveted. At upper edge <u>Double</u> At lower edge <u>Double</u>						
Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (7 1/8) thick, double or <u>single</u> Riveted; with Rivets (3/4 in.) diameter, averaging (2 1/2 ins.) from centre to centre.						
Do. Butts of Main Sheerstrake, double or <u>single</u> Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or <u>single</u> Riveted for <u>whole</u> length <u>amidships</u> . Breadth of laps of plating in double Riveting (4 inches) Breadth of laps of plating in single Riveting ( )						
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or <u>single</u> Riveted? <u>Double</u>						
Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)						
Beams of the various Decks, how secured to the sides? <u>Welded knuckle plates</u> No. of Breasthooks, <u>Three</u> Crutches, <u>Three</u>						
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>Greenock &amp; Glasgow Iron</u>						
Manufacturer's name or trade mark, <u>Boat Iron Works, Butterfield &amp; Swire, Greenock &amp; Glasgow Iron Co.</u>						
We certify that the above is a correct description of the several particulars therein given.						
Builder's Signature, <u>John D. Bowers</u> Surveyor's Signature, <u>James B. Bowers</u>						

IRON 449-0464



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 making good of deficiencies? Yes  
Do the fillings between the ribs and plates fill in solid with single pieces? Yes or are they in short lengths of various thicknesses? No  
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes and are the rivets well and sufficiently countersunk in the plate and punched from the faying surfaces? Yes  
Are there any rivets which either break into or have been put through the seams or butts of the plating? A few

Her Masts, Bowsprit, Yards, &c., are in Good condition, and sufficient in size and length. If they are of Iron or Steel give the 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

9550 Ln

Number for equipment		Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N <sup>o</sup> .	Weight. Ex. Stock.	Test as per Certificate.	Weight req'd per Rule.	Test as per Certificate.
N <sup>o</sup> .	SAILS.	3898.39971	105 Stud	1 1/2	22.15.0.0	1 1/2	28/3/71	4869	8.3.4	10.18.3.0	8.1.0	10 1/2
	Fore Sails,	3897.39971	105 "	1 1/2	22.15.0.0	1 1/2	Bowers	4868	8.2.6	10.18.3.0	8.1.0	10 1/2
	Fore Top Sails,	3897.39971	90 Stud	3/4	10.2.0.0	3/4	28/3/71	4870	8.2.14	10.15.0.0	7.0.2	9 1/2
	Fore Topmast Stay Sails	3897.39971	90 Stud	3/4	10.2.0.0	3/4	Stream	4866	5.0.14	6.10.0.0	3.0.0	
	Main Sails,	3897.39971	90	7 1/2		7 1/2	Kedges	4867	2.1.20	4.10.0.0	1.2.0	
	Main Top Sails,	3897.39971	90	6		6						
and		All of Good quality.										

Her Standing and Running Rigging Hump sufficient in size and Good in quality. She has Two Life Long Boat and Two Others

The present state of the Windlass is Napier's Patent Capstan 2 Good and Rudder Common Pumps Three Lead Good

Engine Room Skylights.—How constructed? Iron Curving 12" deep How secured in ordinary weather? Thick Glass & tarpaulings

What arrangements are there for deadlights in such for bad weather? Shutters inside of Metal

Coal Bunker Openings.—How constructed? Iron runs and lids How are lids secured? Bars How high above deck? Flush

Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board? Open Wire netting

Cargo Hatchways.—How formed? Iron Curving State size 6 feet by 6 feet

If of extraordinary size, state how framed and secured? Iron Curving

What arrangement for shifting beams?

Hatches, themselves, whether strong and efficient? Yes Main Hatchways.—State size 9 feet by 7 feet

Order for Special Survey No. \_\_\_\_\_ DATES of \_\_\_\_\_ 1st. On the several parts of the frame, when in place, and before the plating was wrought

Date \_\_\_\_\_ Surveys held \_\_\_\_\_ 2nd. On the plating during the progress of riveting

Order for Ordinary Survey No. \_\_\_\_\_ while building \_\_\_\_\_ 3rd. When the beams were in and fastened, and before the decks were laid

Date \_\_\_\_\_ as per \_\_\_\_\_ 4th. When the ship was complete, and before the plating was finally coated or cemented

No. 15 in builder's yard. Section 18. 5th. After the ship was launched and equipped

General Remarks, This vessel has been surveyed while building, and as will be seen on the other side is constructed not in conformity with the Rules, but at the same time the Owners are now very desirous to have her Classed. She is intended for a particular trade; viz., on the Coast of Burma for Coast, sound, and River purposes. On comparing her scantlings by the Rules, we find the Frames are fully up to the Rules as regards size, and are placed 4 inches closer; she has also Reverse bars fitted to every frame extending up to the Gunwale, and to the lower part of side lights to alternate frames. The Hold beams are much in excess of the Rules, also the stringer plates on ditto, as well as a substantial, spunketting plate fitted as shown on sketch of midship section herewith appended. She has five substantial watertight bulkheads fitted, three of which extend up to the upper deck and are 8 1/2 in thickness. The plating is fully up to the Rules for the 90A grade, except at the Gunwale as will be seen per sketch; but we are of opinion this discrepancy is compensated for by the substantial Gunwale Angle Iron fitted, and the broad stringers and ties on the ends of the upper beams to which it is attached. In addition to which she is double riveted throughout butts and edges. The Anchors and Chains are fully up to the size required per Rule Table 22; that there have been tested at a Public Machine not authorised by the Society; but the Owners suggest their having the 1 without the letters A.C.P. We are of opinion she worthy the favourable consideration of the Committee for the 90A grade, also leaving the 1 to the favourable consideration of the Committee for the reasons set forth above.

She has left this Port and is now on her voyage to Burma via Suez Canal.

State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, forecabin or raised quarter deck, or of double or part double

In what manner are the surfaces preserved from oxidation? Inside Portland Cement 4 up bilges Outside 2 coats of Red lead, coal tars

We are of opinion this Vessel should be Classed 90A leading this to the favourable consideration of the Committee for the reasons set forth above

The amount of the Entry Fee .....£ 4 : " : " is received by me,

Nov 1871 Special .....£ 10 : 10 : "

& Certificate .... " : 5 : "

(Travelling Expenses)

(if any) £

Committee's Minute 30<sup>th</sup> November 1871

Character assigned 90 A