

Steel IRON SHIP.

(Received at London Office)

5201

4 FEB 1889

No. 5201 Survey held at Dundee Date, First Survey 12 November Last Survey 26 January 1889
On the Steel Twin Screw Tug "Arroo"

TONNAGE under } 122.33
Tonnage Deck }
Net of Third, Spar, }
or Awning Deck }
Net of Poop, or }
Raised Or. Dk. }
Net of Houses }
on Deck }
Net of Forecastle }
Gross Tonnage 122.33
Less Crew Space 15.31
107.02
Less Engine Room 102.73
Register Tonnage 4.29
(as cut on Beam)

ONE, OR TWO-DECKED, THREE-DECKED VESSEL,
SPAR, OR AWNING-DECKED VESSEL.
Half Breadth (moulded) 10.50
Depth from upper part of Keel to top of Upper Deck Beams 8.79
Girth of Half Midship Frame (as per Rule) 17.08
1st Number 36.37
1st Number, if a 3-Decked Vessel deduct 7 feet
Length 102.5
2nd Number 3727
Proportions— Breadths to Length 11.8
Depths to Length— Upper Deck to Keel 11-12
Main Deck ditto

Master
Built at Dundee
When built 1889 Launched 26 Jan. 1889
By whom built W. B. Thompson & Co. Ltd.
Owners, Shropshire Union Railways & Canals
Residence Chester
Port belonging to Chester
Destined Voyage Liverpool
If Surveyed while Building, Afloat, or in Dry Dock.
Surveyed while Building

LENGTH Feet. Inches. BREADTH Feet. Inches. DEPTH top of Floors to Upper Deck Beams Feet. Inches. Power of Engines Horse. N^o. of Decks with flat laid One
on deck as per Rule 102 6 Moulded... 21 0 Do. do. Main Deck Beams... 7 10 1/2 55 N^o. of Tiers of Beams One
Dimensions of Ship per Register, length, 103.8 breadth, 21.2 depth, 7.85 Moulded depth 8' 4"

	Inches in Ship	Inches per Rule	16ths in Ship	16ths per Rule
KEEL, depth and thickness	6 1/4 x 1 3/8	6 1/4 x 1 1/4		
STEM, moulding and thickness	6 x 1 3/8	6 x 1 1/4		
STERN-POST for Rudder do. do.	6 x 1 3/8	6 x 1 1/4		
" " for Propeller				
Distance of Frames from moulding edge to moulding edge, all fore and aft	20	20		
FRAMES, Angle Iron, for 2/3 length amidships	2 1/2 2 1/2 5	2 1/2 2 1/2 5		
Do. for 1/3 at each end	2 1/2 2 1/2 5	2 1/2 2 1/2 5		
REVERSED FRAMES, Angle Iron	2 1/4 2 1/4 4	2 1/4 2 1/4 4		
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	11 5	11 5		
" thickness at the ends of vessel	11 5	11 5		
" depth at 2/3 the half-bdth. as per Rule	5 1/2	5 1/2		
" height extended at the Bilges	22	22		
BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron Single or double Angle Iron on Upper edge	5 1/2 3 7	5 1/2 3 7		
Average space	40	40		
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 Intercoastal, Plates	8 1/2 8	8 1/2 7		
" Rider Plate	6 1/2 8	6 1/2 7		
" Bulb Plate to Intercoastal Keelson	3 3 6	3 3 6		
" Angle Irons				
" Double Angle Iron Side Keelson				
" Side Intercoastal Plate				
" do. Angle Irons				
" Attached to outside plating with angle iron	3 3 6	3 3 6		
BILGE Angle Irons				
" do. Bulb Iron	1/2 length	5 1/2 5		
" do. Intercoastal plates riveted to plating for length				
BILGE STRINGER Angle Irons				
Intercoastal plates riveted to plating for length	3 3 6	3 3 6		
SIDE STRINGER Angle Irons				

The FRAMES extend in one length from Keel to deck and rail at bilge stringer
The REVERSED ANGLE IRONS on floors and frames extend from middle line to bilge stringer and to 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 5/16 ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 2 1/2 ins. from centre to centre.
Butts of one Strake at Bilge for 1/2 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 3/4 in. diameter, averaging 3 5/16 ins. from cr. to cr.
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 2 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 1/2 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 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, 2 Crutches, 3
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Steel Company of Scotland
Manufacturer's name or trade mark For W. B. THOMPSON & Co., Limited.
The above is a correct description.
Builder's Signature, [Signature] Surveyor's Signature, [Signature]
Surveyor to Lloyd's Register of British and Foreign Shipping.

State clearly where plating is of alternate thickness—no distinction in thickness at ends of vessel.
* If Iron Deck, state if whole or part, and if wood deck is laid thereon.

DUNDEE 13A-0015

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? *No*

Masts, Bowsprit, Yards, &c., are *15 ft of wood* and 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 Mast and Bowsprit *41 ft 6 ins long and 8 ins dia.*

NUMBER for EQUIPMENT 3727 (a)		Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Supplied.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	Wt req'd per Rule.	Machine where Tested & Supplied.
SAILS.							Bower Anchors					
CABLES, &c.							(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)					
N ^o .												
Fore Sails,	Chain	120	12/16	10 1/8	11/16	<i>W. & A. Mitchell & Co. Ltd.</i>		1/337	4. 2. 0	6. 17. 2. 0.	3 1/2	<i>W. & A. Mitchell & Co. Ltd.</i>
Fore Top Sails,	Iron Stream Chain	99 48						1/338	4. 2. 0	6. 17. 2. 0.	3 1/2	<i>W. & A. Mitchell & Co. Ltd.</i>
Fore Topmast Stay Sails,	or Steel Wire ..	45	9/16	5 5/8	8/16				9. 0. 0		7	
	or Hempen Strm Cable ..	99 50							2. 1. 16		3 1/4	
	Towline, Hemp.	75	6		75 : 5 1/2		Stream Anchor		1. 0. 10		12	
Main Sails,	or Steel Wire ..	120	3/4		90 : 3		Kedge ...					
Main Top Sails,	Hawser						2nd Kedge ...					
and	Warp											
	quality											

Standing and Running Rigging sufficient in size and good in quality. She has *one* Long Boat and *12 ft 6 ins x 5 ft 2 ins*

The Windlass is *Fisher & Co's steam windlass* & Capstan *minish comb* and Rudder *good* Pumps *4 1/2 ins dia.*

Engine Room Skylights.—How constructed? *Iron casing with wood deck* How secured in ordinary weather? *lasher at side*

What arrangements for deadlights in bad weather? *Wash*

Coal Bunker Openings.—How constructed? *Cast iron frame* How are lids secured? *Secured in* Height above deck? *Four*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *4 small scuppers on each side*

Cargo Hatchways.—How formed? *No hatchways*

State size Main Hatch Forehatch Quarterhatch

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams?

Hatches, If strong and efficient?

Order for Special Survey No. 501

Date 10th Sept. 1888

Order for Ordinary Survey No. 1

Date

No. 89 in builder's yard.

State dates of letters respecting this case

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

1888. November: 12. 20. 21. 28. December: 4. 7.
10. 12. 13. 14. 17. 19. 22. 27.
1889. January: 7. 9. 11. 14. 15. 17. 21.
23. 24. 25. 26.

6th September 1888.

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

This is a Twin Screw Steamer constructed of steel in accordance with the approved plan and in other respects in accordance with the Rules. The material is in good condition as tested at the Steel works by one of the Society's Surveyors. This vessel is intended to be used for towing purposes. The waterballast tanks shown on the tracing in the fore and after peaks are not fitted, see letter from the Lloyds' Register. The material and workmanship are satisfactory.

Low

State if one, two, or three decked vessel, or if spar, or wing 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 and paint* Outside *Paint*

I am of opinion this Vessel should be Classed *100 A1*

The amount of the Entry Fee£ 1 : 0 : is received by me, *MRH*

Special£ 5 : 7 : 2nd February 1889

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

(Travelling Expenses, if any, £ ...)

Committee's Minute

Character assigned

+ 100 A1 Steel

100 A1 Steel

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.

MRH
Lloyd's Register Foundation

No. 5201

No. in Survey Reg. Book.

on the

Master

Engines made at

Boilers made at

Registered Horse

ENGINES, &c.

Description of Engine

Diameter of Cylinder

Diameter of Screw

Diameter of screw

No. of Feed pumps

No. of Bilge pumps

Where do they pump

No. of Donkey Eng

Natural

Are all the bilge suc

No. of bilge injectio

How are the pump

Are all connections

Are they fixed suffic

Are they each fitted

What pipes are can

Are all pipes, cock

Are the pipes, cock

When were stern t

Is the screw shaft

BOILERS, &c.

Number of Boilers

Working Pressure

Description of supe

Can each boiler be

No. of square feet

Area of each valve

Are they fitted with

Length of boilers

Diameter of rivet

Per centage of stren

Size of compensati

Outside diameter 2

Greatest length bet

Pitch of stays to d

rules 157

Pitch of stays to d

smallest part

Greatest pitch of s

plates, front

Diameter of Super

Pitch of rivets

Distance between r