

IRON 472-0237

# IRON SHIP. 1859

Rec 11/6/59

No. 11688 Survey held at Sunderland Date, First Survey December 11<sup>th</sup> 1857 Last Survey June 7<sup>th</sup> 1859

On the Screw Steamer "Tinder" Master J. M. Dearmid

TONNAGE under Tonnage Deck	899.15	ONE OR TWO DECKED, <del>THREE DECKED</del> VESSEL.
Ditto of <del>Upper</del> <u>Lower</u> Deck	8.68	<del>SPAR, OR AWNING-DECKED VESSEL.</del>
Ditto of <del>Upper</del> <u>Lower</u> Deck	75.88	HALF BREADTH (moulded) ... .. 15.41
Ditto of Houses on Deck	67.76	DEPTH from upper part of Keel to top of Upper Deck Beams 19.12
Ditto of Forecastle	16.95	GIRTH of Half Midship Frame (as per Rule) ... .. 31.33
Gross Tonnage	1068.42	1st NUMBER ... .. 65.86
Less Crew Space	39.46	1st NUMBER, if a <b>THREE-DECKED VESSEL</b>
Less Engine Room	341.89	LENGTH ... .. 216.75
Register Tonnage as cut on Beam	687.07	2nd NUMBER ... .. 142.76
		PROPORTIONS—Breadths to Length ... .. 7
		Depths to Length—Upper Deck to Keel ... .. 11
		Main Deck ditto ... .. 11

Built at Sunderland  
 When built 1876 x 7 Launched May 177  
 By whom built Messrs Short & Co.  
 Owners R. J. Avery  
 Port belonging to London  
 Destined Voyage Cadiz  
 If Surveyed while Building, Afloat, or in Dry Dock.

Code Signals Official Number

LENGTH on deck as per Rule ...	Feet. 216	Inches. 9	BREADTH—Moulded ...	Feet. 30	Inches. 10	DEPTH top of Floors to Upper Deck Beams ...	Feet. 17	Inches. 6	Power of Engines ...	Horse. 99	No. of Decks with flat laid	One	No. of Tiers of Beams	Two
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Dimensions of Ship per Register, length 218.3 breadth, 31.2 depth, 17.5

	Inches in Ship			Inches per Rule		
	In Ship	In Ship	16ths In Ship	Inches	Inches	16ths per Rule
KEEL, depth and thickness ...	8	2 3/8	8	2 3/8	8	2 3/8
STEM, moulding and thickness ...	2 1/4	2 3/8	2 1/4	2 3/8	2 1/4	2 3/8
STERN-POST for Rudder do. do. ...	3 7/4	4 3/4	3 7/4	4 3/4	3 7/4	4 3/4
Distance of Frames from moulding edge to moulding edge, all fore and aft ...	23 in			23 in (Class 100A)		
FRAMES, Angle Iron, for 2/3 length amidships ...	4	3	7	4	3	7
Do. for 1/2 at each end ...	4	3	6	4	3	6
REVERSED FRAMES, Angle Iron ...	3	3	6	3	3	6
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships ...	19 1/2	8	19 1/2	8	19 1/2	8
thickness at the ends of vessel ...	7	7	7	7	7	7
depth at 2/3 the half-bdth. as per Rule ...	10 1/4	9 3/4	10 1/4	9 3/4	10 1/4	9 3/4
height extended at the Bilges ...	a fair taper			a fair taper		
BEAMS, Upper, <del>Spar</del> <u>Deck</u> ...	5	3	7	5	3	7
Single or double Angle Iron, Plate or Tee Bulb Iron	on every frame			on every frame		
Average space ...	on every frame			on every frame		
BEAMS, Main, or Middle Deck ...	5	3	7	5	3	7
Single or double Angle Iron, Plate or Tee Bulb Iron	on every 10th frame			on every 10th frame		
Average space ...	on every 10th frame			on every 10th frame		
BEAMS, Lower Deck, Hold, <del>Upper</del> ...	5	3 1/2	7	5	3 1/2	7
Single or double Angle Iron, Plate or Tee Bulb Iron	on every 10th frame			on every 10th frame		
Average space ...	on every 10th frame			on every 10th frame		
KEELSONS Centre line, single or double plate, box, or Intercostal, Plates ...	14	11	14	11	14	11
" Rider Plate ...	10 3/4	11	10 3/4	11	10 3/4	11
" Bulb Plate to Intercostal Keelson ...	5	3 1/2	7	5	3 1/2	7
" Angle Irons ...	5	3 1/2	7	5	3 1/2	7
" Double Angle Iron Side Keelson ...	5	3 1/2	7	5	3 1/2	7
" Side Intercostal Plate <u>width plates</u> ...	5	3 1/2	7	5	3 1/2	7
" do. Angle Irons ...	5	3 1/2	7	5	3 1/2	7
" Attached to outside plating with angle iron ...	5	3 1/2	7	5	3 1/2	7
BILGE Angle Irons ...	5	3 1/2	7	5	3 1/2	7
" do. Bulb Iron ...	7 1/2	7	7 1/2	7	7 1/2	7
" do. Intercostal plates riveted to plating for length ...	5	3 1/2	7	5	3 1/2	7
BILGE STRINGER Angle Irons ...	5	3 1/2	7	5	3 1/2	7
Intercostal plates riveted to plating for length ...	5	3 1/2	7	5	3 1/2	7
SIDE STRINGER Angle Irons ...	5	3 1/2	7	5	3 1/2	7

	Inches in Ship	16ths In Ship	Inches per Rule	16ths per Rule
Flat Keel Plates, breadth and thickness ...	34	10	34	10
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied <u>1/2</u> strake ...	9	9	9	9
fm up. part of Bilge to lr. edge of Sh'rstrake	10	10	10	10
Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	9	9	9	9
Up. or Spar Dk Sh'rstrake, brdth & thickness	36	12	36	12
Butt Straps to outside plating, breadth & thickness	10 1/2	8 1/2	10 1/2	8 1/2
Lengths of Plating ...	5 spaces of frames			
Shifts of Plating, and Stringers ...	2 spaces of frames			
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness ...	31	9	31	9
Angle Iron on ditto ...	5	3 1/2	5	3 1/2
Tie Plates fore and aft, outside Hatchways	Iron deck 6/16			
Diagonal Tie Plates on Beams No. of Pairs,	Iron deck 6/16			
Planksheer material and scantling ...	Iron deck 6/16			
Waterways do. do. ...	Riveted			
Flat of Upper Deck do. do. ...	Riveted			
How fastened to Beams ...	Riveted			
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness ...	Riveted			
Is the Stringer Plate attached to the outside plating?	Yes			
Angle Irons on ditto, No. ...	3	3 1/2	3	3 1/2
Tie Plates, outside Hatchways ...	5	3 1/2	5	3 1/2
Diagonal Tie Plates on Beams, No. of pairs	5	3 1/2	5	3 1/2
Waterways materials and scantlings ...	5	3 1/2	5	3 1/2
Flat of Middle Deck do. do. ...	5	3 1/2	5	3 1/2
How fastened to Beams ...	5	3 1/2	5	3 1/2
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams ...	29	8	29	8
Is the Stringer Plate attached to the outside plating?	Yes			
Angle Irons on ditto, No. ...	3	3 1/2	3	3 1/2
Stringer or Tie Plates, outside Hatchways	5	3 1/2	5	3 1/2
Flat of Lower Deck ...	5	3 1/2	5	3 1/2
Ceiling betwixt Decks, thickness and material ...	2 1/2 battie pine			
in hold do. do. ...	2 1/2			
Main piece of Rudder, diameter at head ...	5 1/4	5 1/4	5 1/4	5 1/4
do. at heel ...	3	3	3	3
Can the Rudder be unshipped afloat? Yes	Yes			
Bulkheads No. <u>11</u> Thickness of <u>6/16 x 5/16</u>	6/16 x 5/16			
Height up <u>Upper deck</u> , afterside to Hold Beams	Upper deck			
How secured to sides of ship <u>Between double frames</u>	Between double frames			
Size of Vertical Angle Irons <u>3 x 3 x 5/16</u> and distance apart <u>30</u> ins.	3 x 3 x 5/16 and 30 ins.			
Are the outside Plates doubled two spaces of Frames in length? Yes	Yes			

Transoms, material. Knights heads. Hawse Timbers. Iron  
 Windlass Hawfield's path Pall Bitt Iron

The FRAMES extend in one length from keel to gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.  
 The REVERSED ANGLE IRONS on floors and frames extend near middle line to Hold Beam Stringer and to gunwale 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 1/16 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 1/2 ins. from centre to centre.  
 Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 3/4 in. diameter averaging 3 1/2 ins. from centre to centre.  
 Butts of 3 Strakes 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 1/2 ins. from cr. to cr.  
 Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 3/4 in. diameter, averaging 3 1/2 ins. from cr. to cr.  
 Edges of Main Sheerstrake, double 4 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 1/2 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 amidships.  
 Breadth of laps of plating in double riveting 4 3/4 Breadth of laps of plating in single riveting 4 1/2

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double & treble throughout

Waterway, how secured to Beams Iron deck (Explain by Sketch, if necessary.)  
 Beams of the various Decks, how secured to the sides? Bulbs with turned down ends No. of Breasthooks, 30 Crutches, 39 Transoms

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angles & Bulbs, J. & S. & Co.

Manufacturer's name or trade mark, W. & A. Mitchell & Co.; Plates, Stockton N.C. Co.; Sherrill & Co. of Bolton, Lancashire

The above is a correct description.  
 Builder's Signature, Short Brothers Surveyor's Signature, James Sibson  
 Surveyor to Lloyd's Register of British and Foreign Shipping.

**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 very well*  
 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.*

18591 Iron

Masts, Bowsprit, Yards, &c., are *of wood &* 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  
*Pumps, This is a sister ship to the "Walton" report 11600 and the pumping arrangement the same as set forth upon the tracing attached to the report of the above ship.*

N <sup>o</sup> .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Length & size req'd per Rule.	Test req'd per Rule.	ANCHORS.		N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	Wght req'd per Rule.	Test req'd per Rule.
								Bowers	Stream					
1 sheet	Fore Sails,	Chain	240	1 1/2	40 1/20	240-1 1/2	40 1/20	1	21-3-0	1	22-3-10	21-0-0	21 1/2	
	Fore Top Sails,	three links fast to a bracing						1	21-1-0	1	21-16-10	21-0-0	21 1/2	
	Fore Topmast Stay Sails	marked R.W.C.P.T. signed J. Hartness Super.						1	18-1-14	1	19-6-2-7	18-0-0	19	
	Main Sails,	Hmpn Strm Cbl	80	3/8		15/16								
	Main Top Sails,	Hawser Chain	80	3/8		9								
		Towlines	160	1/2		5 1/2								
	Warp	120	3/4											
	and	quality good												

Standing and Running Rigging *wire & hemp* sufficient in size and *good* in quality. She has *one* Long Boat and *2* Others  
 The Windlass is *good* Capstan *good* and Rudder *good* Pumps *Metal & good*

Engine Room Skylights.—How constructed? *Iron casing 2 ft above* How secured in ordinary weather? *thumb screws*  
 What arrangements for deadlights in bad weather? *Solid Oak shutters & black circular glass*

Coal Bunker Openings.—How constructed? *Cast Iron* How are lids secured? *Hatches* Height above deck? *9 ins*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *6 Scuppers and 5 ports on each side.*

Cargo Hatchways.—How formed? *Iron plate comings and head ledges*  
 State size Main Hatch *19.2 X 12.0* Forehatch *9.7 X 9.0* Quarterhatch *17.3 X 12.0 & 9.7 X 9.0*

If of extraordinary size, state how framed and secured? —  
 What arrangement for shifting beams? *Nil* A shifting casing in each of the long Hatches

Hatches, If strong and efficient? *Yes Solid Hatches 2 1/2 ins*

Order for Special Survey No.	Date	Order for Ordinary Survey No.	Date	No.	DATES of Surveys held while building as per Section 18.	1st.	2nd.	3rd.	4th.	5th.
26666	22 <sup>nd</sup> Nov 1876			81		On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the process of riveting	When the beams were in and fastened, and before the decks were laid....	When the ship was complete, and before the plating was finally coated or cemented..	After the ship was launched and equipped
						Built under S.S. and Surveying 1876 Dec 11 12 14 19 22 28 31 37 Jan 3 6	9 12 16 20 23 30 Feb 7 9 12 15 20 22 27 March 1 8 12 13 16 20 24 27 29 April 1 10 14 17	19 21 24 26 May 1 14 15 17 22 25 28 30 June 2 11 7		

**General Remarks** (State quality of workmanship, &c.) *This vessel has been constructed in accordance with the rules, & the scantlings set forth upon the tracing of Midships Section attached. She has a raised quarter deck about 84 feet in length, and a sunk forecastle about 25 feet in length. The fore peak is constructed as a Ballast tank with an Iron platform at the height of the Hold Beams, the flat of forecastle and the deck above are also of Iron. A Ballast tank is fitted in the fore hold, extending from the fore Bulkhead of Engine-room, forward about 59 feet, and one in the after hold extending from the After Bulkhead of Engine-room, aft to within 2 frame spaces of the after peak Bulkhead, about 63 feet in length; the after compartment is fitted with an Iron platform at the height of the Hold Beams & is intended to be used as a Ballast tank. Each of the Ballast tanks have been tested to a head of water equal to the load line of the vessel, and the materials and workmanship are of a good description*

State if *one, two, or three*, decked vessel, or *if open, or awning decked*; and the lengths of *peak, forecastle, or raised quarter deck, and the length of double, or part double bottom.*  
 How are the surfaces preserved from oxidation? Inside *Portland Cement to upper* Outside *3 coats of paint*

I am of opinion this Vessel should be Classed *\*100 A.T.* *Turn of Bilges & frame above*

The amount of the Entry Fee ... .. £ 5 : 0 : 0 is received by me,  
 Special ... .. £ 50 : 14 : 6 *5<sup>th</sup> 1877*  
 Certificate ... .. : : :  
 (Travelling Expenses, if any, £ — )

Committee's Minute 12th June, 1877.

Character assigned *100 A* *Loep*  
*R. Lloyd* *Double bottom*

