

IRON SHIPS.

Recd 17/8/72

No. 2337 Survey held at Liverpool

Date, First Survey 21 August 71 Last Survey 13 Aug 72

On the S.S. DAHLIA

Master Crawford

Tonnage under Tonnage Deck	1291.15	ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.	THREE DECKED VESSELS.	Built at	<u>Liverpool</u>
Ditto of Third Deck or Lower Deck	633.97	Half moulded breadth	17.25	When built	<u>1872</u> Launched <u>8th May/72</u>
Ditto of Poop, or Raised Qr. Dk.	1925.72	Depth from upper part of Keel to top of Upper Deck Beams	37.01	By whom built	<u>R.S. Evans & Co</u>
Ditto of Houses on Deck	85.99	Girth of Half Midship Frame (as per Rule)	39.5	Owners	<u>Hargreave Ferguson & Jackson</u>
Ditto of Forecastle	-	3rd Number	83.76	Port belonging to	<u>Liverpool</u>
Gross Tonnage	2011.11	Length	299.17 x 76.76	Destined Voyage	<u>Calcutta</u>
Crew Space, as per Rule	63.10	1st Number	83.76	If Surveyed while Building, Afloat, or in Dry Dock.	
Register Tonnage, cut on Beam	643.56	Length	299.17 x 76.76		
Engine Room	643.56	2nd Number	22964.28		
Register Tonnage, as a Steamer, cut on Beam	1304.45	4th Number	22964.28		
		Depths to Length			
		Breadths to Length			

Length on deck as per Rule, 299 ^{Feet.} 17 ^{Inches.} Moulded Breadth, 34 ^{Feet.} 50 ^{Inches.} Depths from top of Floors to Upper and Main Deck Beams, as per Rule, 25 ^{Feet.} 20 ^{Inches.} Power of Engines, 200 Horse. N^o. of Decks with flat laid TWO N^o. of Tiers of Beams THREE

Dimensions of Ship per Register, length, 300.3 breadth, 34.7 depths 17.8 and 25.2

	Inches in Ship.	Inches required per Rule.		Inches in Ship.	Inches required per Rule.
Keel, if bar iron, depth and thickness	10 x 2 3/4	10 x 2 3/4	Flat Keel Plates, breadth and thickness		
Do. if centre through plate, depth and thickness	10 x 3 1/4	10 x 2 3/4	Plates in Garboard Strakes, breadth and thickness	42 x 1 1/2	36 x 1 1/2
Stem, if bar iron, moulding and thickness	10 x 3 1/4	10 x 2 3/4	Do. from Garboard to upper part of Bilges	1 1/2	1 1/2
Stern-post for Rudder do. do.	10 x 5 1/2	10 x 5 1/2	Do. of doubling at Bilge, or increased thickness, and length applied		
Stern-post for Propeller	10 x 5 1/2	10 x 5 1/2	Do. from up. part of Bilge to lr. edge of Sh'rstrake	10 1/2	10 1/2
Distance of Frames from moulding edge to moulding edge, all fore and aft	24 in	(Class 24 in 100 A)	Do. Main Sheerstrake, breadth and thickness	50 x 1 1/2	36 x 1 1/2
Frames, size of Angle Iron, for 2/3 length amidships	4 1/2 x 3 x 7/16	4 1/2 x 3 x 7/16	Do. of doubling at Sh'rstrake, & length applied		
Do. for 1/3 at each end	4 1/2 x 3 x 7/16	4 1/2 x 3 x 7/16	Do. from Mn. to Up. or Spar Dk. Sh'rstrake	10 1/2	10 1/2
Reversed Frames, size of Angle Iron	3 1/2 x 3 x 7/16	3 x 3 x 7/16	Do. Up. or Spar Dk Sh'rstrake, brdth & thickness	51 x 12/16	36 x 12/16
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	22 x 9/16	22 x 9/16	Butt Straps to outside plating, breadth & thickness	1 1/4 - 1 7/8	1 1/4 - 1 7/8
Do. at the ends	8 1/2 - 7/16	8 1/2 - 7/16	Lengths of Plating	SIX SPACES.	SIX SPACES.
Do. do. do. at Bilge Keelson	9/16	9/16	Shifts of Plating, and Stringers	TWO SPACES.	TWO SPACES.
Do. height extended at the Bilges	THICE DEPTH.	THICE DEPTH	Gunwale Plate on ends of Awning Spar, or Upper Deck Beams, breadth and thickness	51 x 8/16	43 x 8/16
Beams, Upper, Spar, or Awning Deck (No. 9 F) single or double Angle Iron, Plate or Tee Bulb Iron	7 x 7/16	7 x 7/16	Angle Iron on ditto	4 x 4 x 9/16	4 x 4 x 9/16
Single or double Angle Iron on Upper edge	2 3/4 x 2 1/2 x 5/16	2 3/4 x 2 1/2 x 5/16	Tie Plates (fore and aft), outside Hatchways	14 1/4 x 8/16	14 x 8/16
Average space	4 feet.	4 feet.	Diagonal Tie Plates on Beams (No. of Pairs, 52)	14 1/4 x 8/16	14 x 8/16
Beams, Main or Middle Deck (No. 9 F) single or double Angle Iron, Plate or Tee Bulb Iron	8 1/2 x 8/16	8 1/2 x 8/16	Planksheer material and scantling	GUTTER	GUTTER.
Single or double Angle Iron, on Upper Edge	3 x 3 x 4/16	3 x 3 x 4/16	Waterways do. do.		
Average space	4 feet.	4 feet.	Flat of Upper Deck do. do.	4 7/8	4 in
Beams, Lower Deck, Hold or Orlop (No. 9 F) single or double Angle Iron, Plate or Tee Bulb Iron	8 1/2 x 8/16	8 1/2 x 8/16	How fastened to Beams	9 1/2 Rivets	
Single or double Angle Iron on Upper Edge	3 x 3 x 4/16	3 x 3 x 4/16	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	4 1/2 x 10 1/16	4 3 x 10 1/16
Average space	16-18 and 20 feet.	about 20 feet.	(Is the Stringer Plate attached to the outside plating?)	YES.	
Keelson Centre line, single or double plate, box, or Intercostal, size of Plates	19 x 13/16	19 x 13/16	Angle Irons on ditto (No. 2)	4 x 4 x 9/16	4 x 4 x 9/16
Do. Bulb Plate to Intercostal Keelson	9 x 10 1/16	9 x 10 1/16	Tie Plates, outside Hatchways		
Do. Size of Angle Irons	6 x 4 x 9/16	6 x 4 x 9/16	Diagonal Tie Plates on Beams (No. of pairs)		
Do. Side Intercostal Keelson, size of Plates	24 x 9/16	24 x 9/16	Waterways materials and scantlings		
Do. Angle Irons on tops of Floors	6 x 4 x 9/16	6 x 4 x 9/16	Flat of Middle Deck do. do.	6 1/2 Iron	6 1/2 Iron
Do. Bilge Keelson, Bulb Iron	8 1/2 x 8/16	8 1/2 x 8/16	How fastened to Beams	RIVETED	
Do. do. Intercostal plates riveted to plating for 3/5 length	6 x 4 x 9/16	6 x 4 x 9/16	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	32 19/16	32 x 9/16
Do. do. Angle Irons	6 x 4 x 9/16	6 x 4 x 9/16	(Is the Stringer Plate attached to the outside plating?)	YES	inside of plating
Side Stringers (No. ONE) size of Angle Irons	6 x 4 x 9/16	6 x 4 x 9/16	Angle Irons on ditto (No. 1)	6 x 4 x 10/16	4 x 4 x 9/16
Do. Intercostal plates riveted to plating for 3/5 length	6 x 4 x 9/16	6 x 4 x 9/16	Stringer or Tie Plates, outside Hatchways	None, Box Beams as approved by Committee	
			Flat of Lower Deck		
			Ceiling betwixt Decks, thickness and material	R.P.P. 2 1/2	2
			Do. in hold do. do.	R.P.P.P. 3	3
			Main piece of Rudder, diameter at head	7 1/4	7 1/4
			Do. do. at heel	4 1/2	3 3/4
			(Can the Rudder be unshipped afloat?)	Yes	
			Bulkheads No. 5 Thickness of	6/16	6/16
			Do. Height up	middle deck. Engine Bulkhead to upper deck	
			Do. How secured to the sides of the ship	Double Frames.	
			Do. Size of Vertical Angle Irons, 3 x 3 x 7/16 and their distance apart,	30 in	
			Do. Are the outside Plates doubled two spaces of Frames in length?	yes	

Transoms, material Iron or, if none, in what manner compensated for.
 Knight-heads Iron Hawse Timbers Iron
 Windlass Emerson Walker's Pat Pall Bitt —

The Frames extend in one length from Keel to Gunwale Riveted through plates with (7/8 in.) Rivets, about 7 in. apart.
 The Reverse Angle Irons on the floors and frames extend across the middle line to across middle deck and to Gunwale alternately
 Keelsons. Are the various lengths of Plates and Angle Irons properly connected? yes And are their butts properly shifted? yes.

Plates, Garboard, double or Riveted to Keel, double or at upper edge, with Rivets (1/2 - 7/8 in.) diameter, averaging (5-4 ins.) from centre to centre.
 Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or single Riveted; with Rivets (7/8 in.) diameter, averaging (4 ins.) from centre to centre.
 Do. Butts from Keel to turn of Bilge, worked carvel with butt straps to strakes (1/16 thick, double or single Riveted; with Rivets (7/8 in.) diameter averaging (4 ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? no
 Do. of Three Strakes at Bilge for half length, treble riveted with Butt Straps 1/16 - thicker than their plates.
 Do. Edges from bilge to Main Sheerstrake, worked carvel with a lining piece () thick, or clencher, double or single riveted; with rivets (7/8 in.) diameter, averaging (4 ins.) from centre to centre.
 Do. Edges of Sheerstrake, Main, double or single Riveted. Upper, double or single Riveted. At upper edge Single At lower edge Double
 Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (10 1/2 1/2) thick; double or single Riveted; with Rivets (7/8 in.) diameter, averaging (4 ins.) from centre to centre.
 Do. Butts of Main Sheerstrake, double or treble Riveted. Butts of Upper or Spar Sheerstrake, and Upper Deck Stringer Plate, double or treble Riveted for half length amidships. Breadth of laps of plating in double Riveting (5 1/4) Breadth of laps of plating in single Riveting ()

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double and treble riveted
 Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.) GUTTER.
 Beams of the various Decks, how secured to the sides? Beam Keels Riveted to frames. No. of Breasthooks, 3 Crutches, 3

What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? good
 Manufacturer's name or trade mark, 7 1/2 clough Hill - 5 x 4 1/2 Best. "Duplex"

We certify that the above is a correct description of the several particulars therein given.
 Builder's Signature, R.S. Evans Surveyor's Signature, J. Jones

IRON 451-0450

10438 In

Workmanship. Are the butts of plating planed or otherwise fitted? Planed where practicable
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
Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? solid single pieces
Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? yes. and are the rivet holes 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 in Butts.

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

Masts 85 1/2 ft long 26" diam at Deck. 17 1/2" at Cap - In 2 plates 6/16" to 5/16" at head, doubled at partners. 3 Angle bars 3 1/2 x 3 x 6/16. beams single riveted, double riveted butts, except at rounds and partners where they are treble riveted
Lower Masts 63 1/2 ft long 16" diam. 2 plates 4/16" to 3/16" double riveted of Juss hoops. 2 Angle bars 2 1/2 x 2 x 5/16 butts treble riveted for 3/4" length - remainder double riveted (Tipton Public Machine of May/72. San Tegeuma Ltd)

N ^o .	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test as per Certificate.	Wght req'd per Rule.	Test req'd per Rule.
			300	1 3/4	59" 2	1 3/4	59" 2		5354	32.3.7	30.14.2.21	30.0.0	28 1/2
									5356	32.0.10	30.4.1.14	30.0.0	do
			100	1 5/16					5355	27.2.10	26.16.3.14	25.2.0	25 3/20
			90	1 1/2		11						12.0.0	
				8		11						6.0.0	
				5 1/2		7						3.0.0	

Her Standing and Running Rigging Hemp sufficient in size and Good in quality. She has a Long Boat and 2 Life Boats. 2 Sigsbee Boats and one Log

The present state of the Windlass is Good Capstan - and Rudder Good Pumps 3 Main & 1 Downcast for fore Comp^{ts}

Engine Room Skylights. How constructed? Iron coverings wire guards How secured in ordinary weather? knob bolts with nuts

What arrangements are there for deadlights in such for bad weather? Blacklights fixed & well secured

Coal Bunker Openings. How constructed? Iron, double covers How are lids secured? lock & handle 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 Bulkheads

Cargo Hatchways. How formed? Iron Plates State size Fore & After Hatches 12ft x 9ft

If of extraordinary size, state how framed and secured? Ordinary size

What arrangement for shifting beams? none

Hatches, themselves, whether strong and efficient? Strong Main Hatchways. - State size 16ft x 12feet

Order for Special Survey No. 557 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought

Date 29th Sept 71 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. in builder's yard. Section 18. 5th. After the ship was launched and equipped

General Remarks, She is a three decked vessel with house aft. The outfit of this vessel has been completed under my supervision and is good and efficient

Wm. C. Davey

Tracing attached.

State if one, two or three decked vessel, or if spar or arcing decked, and lengths of poop, fore-castle or raised quarter deck, or of double or part double bottom.

In what manner are the surfaces preserved from oxidation? Inside Cement below-deckers paint Outside paint

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

The amount of the Entry Fee£ 5 " " " is received by me,

Special Certificate£ 73 14 15/11/72

(Travelling Expenses) (if any) £

Committee's Minute Liverpool 16th August 1872

Character assigned 100 A 1

Machinery Certificate attached

James Purdie
outfit being complete she is eligible to class 100 A 1
Wm. C. Davey
This ship appears to have been built in conformity with the Rules and eligible to class 100 A 1