

# IRON SHIPS.

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  
 Ditto of Third Deck 633.97  
 or Lower Deck 1925.12  
 Ditto of Poop, or Raised Qr. Dk. 85.99  
 Ditto of Houses on Deck -  
 Ditto of Forecastle -  
 Gross Tonnage 2011.11  
 Crew Space, as per Rule 63.10  
 Register Tonnage, cut on Beam 643.56  
 Engine Room 1304.45  
 Register Tonnage, as a Steamer, cut on Beam

ONE, OR TWO DECKED, SPAR, OR AWNING-DECKED VESSELS.

Half moulded breadth 17.25  
 Depth from upper part of Keel to top of Upper Deck Beams 37.01  
 Girth of Half Midship Frame (as per Rule) 39.5  
 1st Number 83.76  
 Length 299.17 x 76.76

2nd Number 22.964.28

Depths to Length.

THREE DECKED VESSELS.

Half Moulded Breadth 17.25  
 Total Depth if three or more Decks 37.01  
 Total Girth of Half Midship Frame 39.5  
 3rd Number 83.76  
 Length 299.17 x 76.76

4th Number 22.964.28

Breadths to Length

Built at Liverpool

When built 1872 Launched 8 May 72

By whom built R.S. Evans & Co

Owners Hargreave Ferguson & Jackson

Port belonging to Liverpool

Destined Voyage Calcutta

If Surveyed while Building, Afloat, or in Dry Dock.

Length on deck as per Rule 299.17 Feet. Inches. Moulded Breadth 34.50 Feet. Inches. Depths from top of Floors to Upper and Main Deck Beams, as per Rule 25.20 Feet. Inches. Power of Engines, 200 Horse. N° of Decks with flat laid TWO N° 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 5 1/2           | 10 x 5 1/2                | 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. fm 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 1/2 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 1/2 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 1 1/2                               | 36 x 1 1/2                |
| 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                                   | 11 1/4 - 17 1/2                          | 11 1/4 - 17 1/2           |
| Do. at the ends  | 8 1/2 - 7 1/2        | 8 1/2 - 7 1/2             | 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 Lower Deck, Spar, or Upper Deck Beams, breadth and thickness | 51 x 8 1/2                               | 43 x 8 1/2                |
| Beams, Upper, Spar, or Awning Deck (No. 9 F)   | 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, Plate or Tee Bulb Iron  | 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 1/2                           | 14 x 8 1/2                |
| Average space  | 4 feet.              | 4 feet.                   | Diagonal Tie Plates on Beams (No. of Pairs, 52)                                       | 14 1/4 x 8 1/2                           | 14 x 8 1/2                |
| Beams, Main or Middle Deck (No. 9 F) single or double Angle Iron, Plate or Tee Bulb Iron       | 8 1/2 x 8 1/2        | 8 1/2 x 8 1/2             | 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 1/2        | 8 1/2 x 8 1/2             | How fastened to Beams   | 9 1/2 in. 3 in. 1/2                      |                           |
| 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 1/2                           | 4 3 x 10 1/2              |
| 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 1/2           | 9 x 10 1/2                | 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 in                                 | 6 1/2 in                  |
| Do. Bilge Keelson, Bulb Iron   | 8 1/2 x 8 1/2        | 8 1/2 x 8 1/2             | How fastened to Beams   | 3 1/2 in                                 |                           |
| 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 1/2                                   | 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.                                     |                           |
| 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 9/16                             | 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 |                           |

Transoms, material Iron or, if none, in what manner compensated for.

Knight-heads Iron Hawse Timbers Iron

Windlass Emerson & Mackie Pat Pall Bitt

The Frames extend in one length from Keel to Gunwale

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 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 (1/4 in. 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 (1/4 in. 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 clench ball - 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, James Jones



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 ft long 26" diam at Deck. 1 1/2" at Cap - In 2 plates 6/16" to 5/16" at head, double 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 in water of Luss 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 7 May/72. San Vegerma)*

| 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. | Wt. req'd per Rule. | Test req'd per Rule. |
|----------------------|--|----------|---------|--------------------------|---------------------|----------------------|---|------------------|--------------------|--------------------------|---------------------|----------------------|
| 22964                |  | 300      | 1 3/4   | 59" 2                    | 1 3/4               | 59" 2                | &c.   | 5354             | 32.3.7             | 30.14.2.21               | 30.0.0              | 28 1/2               |
| 17" May/72 & Vegerma |  | 100      | 1 5/16  |                          |                     |                      | Bowers  | 5356             | 32.0.10            | 30.4.1.14                | 30.0.0              | do                   |
| 100                  |  | 90       | 11      |                          | 11                  |                      | (State Machine where Tested, and name of Superintendent). | 5355             | 27.2.10            | 26.16.3.14               | 25.2.0              | 25 3/2               |
| 100                  |  |          | 8       |                          | 11                  |                      | Stream  |                  | 13.0.2             |                          | 12.0.0              |                      |
| 100                  |  |          | 7 1/2   |                          | 7                   |                      | Kedges  |                  | 6.2.0              |                          | 6.0.0               |                      |
| 100                  |  |          |         |                          |                     |                      |   |                  | 3.1.0              |                          | 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* Slightly Row and *one* Sigs

The present state of the Windlass is *Good* Capstan *Good* and Rudder *Good* Pumps *3* Main & *1* Downstroke for fore Comp

**Engine Room Skylights.** How constructed? *Iron Lungs wire guards* How secured in ordinary weather? *new 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 12 ft x 9 ft*

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 *16 ft x 12 feet*

Order for Special Survey No. *537* 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 Superintendence and is good and efficient*

*Wm. E. Davey*

*Tracing attached.*

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

In what manner are the surfaces preserved from oxidation? Inside *Cement below helges. 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,

*Am. F. M. S.* Special Certificate .....£ *73 14* 15/11/72 *J. M. S. Purdie*

(Travelling Expenses) (if any) £

**Committee's Minute** *Liverpool 16th August 1872*

**Character assigned** *100 A 1*

*Machine Certificate Attached*

*A. & C. P. E. M. C. 72*

*This ship appears to be built in conformity with the Rules and eligible to class 100 A 1*

*Wm. E. Davey*

*1872*