

# IRON SHIPS.

*Compared with Table G of the Rules 1900 and 12th grade*  
 No. 1857 Survey held at Liverpool Date Dec 7 1863  
 on the Ship "Arviraire" Master J. Meikle  
 Tonnage Gross 1395 <sup>71</sup> under deck 1344 <sup>65</sup> Engine Room 1344 Register 1395 <sup>71</sup> Built at Liverpool  
 When Built 1863 By whom built J. & W. Hall & Sons Owners G. H. Fletcher & Co.  
 Port belonging to Liverpool Destined Voyage Calcutta  
 Surveyed Afloat or in Dry Dock On the Building Slip and in dry dock

Length aloft		Extreme Breadth		Depth from top of Upper Deck		Beam to top of Floor		Power of Engines		Horse No.	
Feet.	Inches.	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.
216	8/10	36	0	25	0						
Distance of Frames or Ribs from moulding edge to moulding edge, all fore and aft } <u>18</u>											
Floors, Size of Angle Iron, and No. <u>One</u> at bottom of Floor Plate.											
" depth and thickness of Floor Plate at mid line <u>25</u> x <u>1/2</u>											
" depth and thickness of Floor Plate at Bilge Keelson <u>10</u> x <u>1/2</u>											
" Size of Reversed Angle Iron, and No. <u>One</u> at top of Floor Plate.											
Frames, Size of Angle Iron, single or double <u>5</u> <u>3 1/2</u> <u>9/16</u>											
" Reversed Iron, if to every frame or every <u>3 1/2</u> <u>3</u> <u>8/16</u>											
Beams, Deck (No. <u>One</u> ) double Angle Iron <u>3 1/2</u> <u>3</u> <u>8/16</u>											
" Bulb Iron with double Angle Iron on top <u>3 1/2</u> <u>3</u> <u>8/16</u>											
" depth & thickness of plate amidships <u>9</u> x <u>9/16</u>											
" double or single Angle Iron, on lower edge <u>9</u> x <u>9/16</u>											
" average space between <u>36</u>											
" if wood (No. <u>One</u> ) sided & moulded <u>36</u>											
Hold, or Lower Deck (No. <u>One</u> ) double Angle Iron or Bulb Iron with double Angle Iron on top <u>3 1/2</u> <u>3</u> <u>8/16</u>											
" depth & thickness of plate amidships <u>9</u> x <u>9/16</u>											
" double or single Angle Iron, on lower edge <u>9</u> x <u>9/16</u>											
" average space between <u>36</u>											
" if wood (No. <u>One</u> ) sided & moulded <u>36</u>											
Paddle, wood, sided and moulded or if Iron, size of Plate <u>36</u>											
Engine <u>One</u>											
Keelson, wood, sided & moulded, iron, size of plate, if Box, give sketch & dimensions <u>3 1/2</u> <u>3</u> <u>8/16</u>											
" Side or Bilge <u>5 1/2</u> <u>4 1/2</u> <u>9/16</u>											
" Number <u>5 1/2</u> <u>4 1/2</u> <u>9/16</u>											
Transoms, material or, if none, in what manner compensated for. <u>Iron plate and frames.</u>											
Bulkheads, No. <u>One</u> forward Thickness of <u>1/16</u> to height of upper deck											
" how secured to the sides of the ship <u>By double frame</u>											
" size of vertical angle iron and their distance apart <u>3 1/2</u> x <u>3</u> x <u>8/16</u> & <u>2</u> - <u>6</u>											
The reverse angle irons on the floors extend in one length from <u>Keel</u> to <u>gunwale</u> rivetted through plates with ( <u>1/8</u> in.) rivets, about ( <u>2</u> ) apart.											
" on the frames " " from <u>middle line</u> to <u>gunwale</u> in two lengths.											
Keelson, how are the various lengths of plates or angle irons connected? <u>By 6 Butt straps and the angle iron shipped.</u>											
Plates, Garboard, double or single rivetted to keel & at upper edge, with rivets ( <u>1/2</u> x <u>5/8</u> ins.) diameter averaging ( <u>2 3/4</u> in.) from centre to centre of rivet.											
" Edges from Garboards to upper part of bilge, worked carvel with a lining piece ( <u>1/4</u> in.) thick, or clencher, double or single rivetted; rivets ( <u>7/8</u> in.) diameter, averaging ( <u>3 1/2</u> ins.) from centre to centre of rivets.											
" Butts from Keel to turn of bilge, worked carvel with a lining piece ( <u>1/4</u> in.) thick, double or single rivetted; rivets ( <u>7/8</u> in.) diameter, averaging ( <u>3 1/2</u> ins.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? <u>no.</u>											
" Edges from bilge to planksheer, worked carvel with a lining piece ( <u>1/4</u> in.) thick, double or single rivetted; rivets ( <u>7/8</u> in.) diameter, averaging ( <u>3 1/2</u> in.) from centre to centre of rivets. Do the lining pieces lap over and rivet through the lands of the strake below? <u>no.</u>											
" Butts from bilge to planksheers, worked carvel with a lining piece ( <u>1/4</u> in.) thick, or clencher, double or single rivetted; rivets ( <u>7/8</u> in.) diameter averaging ( <u>3 1/2</u> ins.) from centre to centre of rivets. Breadth of laps in double rivetting ( <u>5</u> ) Breadth of laps in single rivetting ( <u>2 1/8</u> )											
Planksheer, how secured to the plating of the sides { Explain by sketch, { <u>Sketch on the other side</u>											
Waterway " " planksheer and to the Beams { if necessary. { <u>none</u>											
Side trussing breadth and thickness of plates how secured? <u>none</u>											
Deck trussing " " " <u>3 pairs of diagonal ties 13 1/2 x 1/16 in. @ 45° and 135°</u>											
Deck Beams, how secured to the side? <u>By three plates fastened out of the Ball Iron Beams</u>											
Hold or Lower Deck " " " <u>2</u>											
Paddle " " " <u>2</u>											
No. of breasthooks crutches how are pointers compensated? <u>All fore &amp; aft ties connected at mid</u>											
What description of iron is used for the angle iron and plate iron in the vessel? <u>Lead &amp; Zinc</u>											

Builder's Signature

IRON 437-0161



3492. Iron.  
Workmanship. Are the lands or laps of the clenchwork in all cases in breadth at least five times the diameter of the rivets in double rivetted edges and butts, and at least three times the diameter of the rivets where single rivetting is admitted? yes.

Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? generally

Do the fillings between the ribs and plates fill in solid with single pieces, or are they in short lengths of various thicknesses? Solid.

Do the holes for rivetting plate to frames, lining pieces, or plate to plate, &c., conform well to each other? generally so. and are the rivet holes well and sufficiently countersunk in the outer plate? generally well

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, Yards, &c., are in good condition, and sufficient in size and length.

She has SAILS.

8 No. 1 and 2  
Some Sails

Fore Sails,  
Fore Top Sails,  
Fore Topmast Stay Sails,  
Main Sails,  
Main Top Sails,

CABLES, &c.

Public test by with  
Chain proof 63 5 300 1 1/2  
Stream Chain iron cut  
Hampden Stream Cable 15 5 75 1 1/2  
Hawser ..... 90 10  
Towlines .....  
Warp ..... 90 6  
All of good quality.

ANCHORS, and their weights.

Patent and Iron Stairs  
Cast-iron of iron produced  
and private test 37 4 1-45-  
Bower, ..... 35-0 1-40-  
Stream, ..... 14-0 1 13-  
Kedge, ..... 8 16 1 6-3  
5-10 1 3-2

Her Standing and Running Rigging Strong & wire sufficient in size and good in quality.

She has One Long Boat and 3 Others

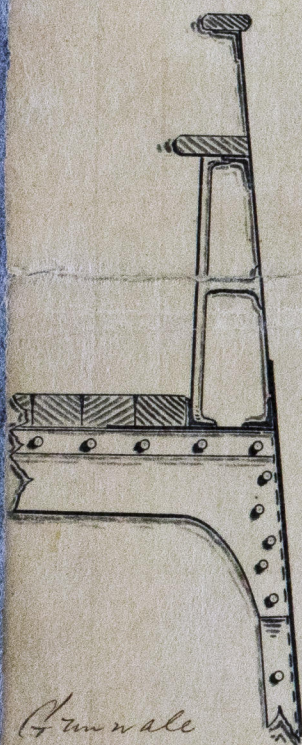
The present state of the Windlass is good Capstan good and Rudder good Pumps Iron and good  
4 in Main Hold and one in fore Comp.

General Remarks, Statement and Date of Repairs, extent of corrosion (if any) both internally and externally, and condition of rivets.

DATES of Surveys  
held while building,  
as per Section 17.

- 1st. On the several parts of the frame, when in place, and before the plating was wrought  
2nd. On the plating during the progress of rivetting  
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  
5th. After the ship was launched

Under Survey  
from July 20<sup>th</sup> 1864  
Specially, but seen  
21<sup>st</sup> March 1866  
This vessel has a full fore-castle and a short raised quarter-deck, the beams of the fore-castle are of double angle iron 5 x 3 1/2 x 3/16. The alternate frames in way of fore-castle are cut off at the under side by deck-beams, but the spacing of frames being and the side plating of fore-castle 3/16 may in my opinion be considered efficient. In other respects she is in accordance with the requirements of the Rule in Table C for the Class recommended.



\* Lower masts, yards of steel, masts and bowsprit-plates are 3/16 in way of plating, and 5/16 above and below, with 4 angle bars of 5. The whole length 4 x 3 x 3/8. Double riveted butts and edges, topmasts of 3/8 Iron, lower yards of 5/16 and 1/2 steel with two angle bars of steel 3 x 2 x 5/16

In what manner are the surfaces preserved from oxidation? By paint and Portland Cement in place of

I am of opinion this Vessel should be classed +12 A1

The amount of the Fee ..... £ 5 : : : is received by me,

March 1866 Special ..... £ 69 : 16 : - 2/12/64

Certificate (if required) ..... £ Gates

Committee's Minute Spec. 1<sup>st</sup> March 1864

Character assigned + A1

Brill S.S. (C.P.)  
RE



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Foundation