

IRON SHIP.

21025

By 23/5/78

No. 4661 Survey held at Glasgow

Date, First Survey 2nd April 1878Last Survey 20th May

1878

On the

S.S. Speke Hall

Master

H. Brand

TONNAGE under Tonnage Deck 2502.35
Ditto of Third, Second, or Loading Deck.
Ditto of Boop, or Boiled for the.
Ditto of Houses on Deck 169.54
Ditto of Passageway
Gross Tonnage 2671.89
Less Open Space 85.93
2585.96
Less Engine Room 855.01
Register Tonnage as cut on Beam 1730.95

ONE, OR TWO DECKED, THREE DECKED VESSEL.
SPAR, OR KNIFE-DECKED VESSEL.
HALF BREADTH (moulded) 18.29
DEPTH from upper part of Keel to top of Upper Deck Beams 28.58
GIRTH of Half Midship Frame (as per Rule) 41.50
1st NUMBER 88.37
1st NUMBER, if a THREE-DECKED VESSEL [deduct 7 feet 81.37]
LENGTH 358.25
2nd NUMBER 29.150
PROPORTIONS—Breadths to Length 9.7
Depths to Length—Upper Deck to Keel 12.5
Main Deck ditto 17.0

Built at Whiteinch Glasgow
When built 1878 Launched 30 March
By whom built Charles Connell & Co.
Owners Robert Alexander
Port belonging to Liverpool
Destined Voyage Bombay via Suez
If Surveyed while Building, Afloat, or in Dry Dock.

LENGTH on deck as per Rule 358.25 Feet. 18.29 Inches. BREADTH—Moulded 36.58 Feet. 18.29 Inches. DEPTH top of Floors to Upper Deck Beams 26.25 Feet. 18.29 Inches. Power of Engines 400 Horse. No. of Decks with flat laid Two No. of Tiers of Beams Three

Dimensions of Ship per Register, length, 361.4 breadth, 37.05 depth, 26.25

KEEL, depth and thickness	Inches in Ship.	Inches per Rule.	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	Inches in Ship.	16ths in Ship.	Inches per Rule	16ths per Rule
STEM, moulding and thickness	11 x 2 3/4	11 x 2 3/4	" of doubling at Bilge, or increased thickness, and length applied	11 x 12	11 x 12	11 x 12	11 x 12
STERN-POST for Rudder do. do.	11 x 5 1/2	11 x 5 1/2	" fm up. part of Bilge to l. edge of Sh'rstake.	11	11	11	11
" " for Propeller	11 x 5 1/2	11 x 5 1/2	" Main Sheerstrake, breadth and thickness of d'bling at Sh'rstake, & length applied from M. to Upr. & Sp. Strake.	40	13	40	13
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	" Upr. & Sp. Strake, breadth & thickness	11 1/2	13	11 1/2	13
FRAMES, Angle Iron, for 1/2 length amidships	5 3 1/2	5 3 1/2	Butt Straps to outside plating, breadth & thickness	28 6 3/4	14 6 9	16 3/4	14 6 9
Do. for 1/2 at each end	3 1/2	3 1/2	Lengths of Plating	Six Spans	Five Spans		
REVERSED FRAMES, Angle Iron	3 1/2	3 1/2	Shifts of Plating, and Stringers	Two Spans	Two Spans		
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	24 1/2	10	Gunwale Plate on ends of Main or Middle Deck	54	9	54	9
" thickness at the ends of vessel	8	8	Upper Deck Beams, breadth and thickness	4 x 4	7/16	4 x 4	7/16
" depth at 3/4 the half-bdth. as per Rule	12 1/4	12 1/4	Angle Iron on ditto	4 x 4	7/16	4 x 4	7/16
" height extended at the Bilges	49	49	The Plates are and are, outside Hatchways	Iron ditto			
BEAMS, Upper, Spar, or Loading Deck	7 1/2	7 1/2	Diagonal Tie Plates on Beams No. of Pairs	Iron ditto			
Single or 2 the Eng. Iron, Plate or Top Bulb Iron	3	3	Plankwork material and scantling	Butts			
Single or double Angle Iron on Upper edge	3	3	Waterways do. do.	Iron 6/16			
Average space	48	48	Flat of Upper Deck do. do.	g. Pine 12" & small portion Teak			
BEAMS, Main, or Middle Deck	9	9	How fastened to Beams	Strips & Nuts & Screws			
Single or 2 the Eng. Iron, Plate or Top Bulb Iron	3 1/2	3	Stringer Plate on ends of Main or Middle Deck	50	10	50	10
Single or double Angle Iron on Upper Edge	3 1/2	3	Beams, breadth and thickness	4 x 4	7/16	4 x 4	7/16
Average space	48	48	Is the Stringer Plate attached to the outside plating?	Yes			
BEAMS, Lower Deck, Hold, or Bottom	9	9	Angle Irons on ditto, No. 2	4 x 4	7/16	4 x 4	7/16
Single or 2 the Eng. Iron, Plate or Top Bulb Iron	3 1/2	3	The Plates, outside Hatchways	Iron ditto			
Single or double Angle Iron on Upper Edge	3 1/2	3	Diagonal Tie Plates on Beams, No. of Pairs	Iron ditto			
Average space	48	48	Waterways materials and scantling	Butts			
KEELSONS Centre line, single or double plate, box, or Intermediate, Plates	21	14	Flat of Middle Deck do. do.	Iron 7/16			
" Rider Plate	14	14	How fastened to Beams	Strips & Nuts & Screws			
" With Plate to Intermediate Keelson	6 1/2	4	Stringer Plates on ends of Lower Deck, Hold or	44	9/16	44	9/16
" Angle Irons	6 1/2	4	Chase Beams	3 1/4	8/16	3 1/4	8/16
" Double Angle Iron Side Keelson	6 1/2	4	Is the Stringer Plate attached to the outside plating?	Yes			
" Side Intercoastal Plate	6 1/2	4	Angle Irons on ditto, No. 2	4 x 4	7/16	4 x 4	7/16
" do. Angle Irons	6 1/2	4	The Plates, outside Hatchways	Iron ditto			
" Attached to outside plating with angle iron	3 1/2	3 1/2	Diagonal Tie Plates on Beams, No. of Pairs	Iron ditto			
BILGE Angle Irons	6 1/2	4	Waterways materials and scantling	Butts			
do. 204 ft. Amidships	6 1/2	4	Flat of Upper Deck do. do.	g. Pine 12" & small portion Teak			
do. 204 ft. Amidships	6 1/2	4	How fastened to Beams	Strips & Nuts & Screws			
do. Intercoastal plates riveted to plating for 35 length	6 1/2	4	Stringer Plate on ends of Main or Middle Deck	50	10	50	10
BILGE STRINGER Angle Irons	6 1/2	4	Beams, breadth and thickness	4 x 4	7/16	4 x 4	7/16
Intercoastal plates riveted to plating for 35 length	6 1/2	4	Is the Stringer Plate attached to the outside plating?	Yes			
SIDE STRINGER Angle Irons	6 1/2	4	Angle Irons on ditto, No. 2	4 x 4	7/16	4 x 4	7/16
Transoms, material. Knight-heads. Hawse Timbers. Plate & Iron	6 1/2	4	The Plates, outside Hatchways	Iron ditto			
Windlass Harfield's Patent Pall Bitt Not required	6 1/2	4	Diagonal Tie Plates on Beams, No. of Pairs	Iron ditto			

Transoms, material. Knight-heads. Hawse Timbers. Plate & Iron
Windlass Harfield's Patent Pall Bitt Not required

The FRAMES extend in one length from Keel to gunwale Riveted through plates with 7/8 in. Rivets, about 7 apart.

The REVERSED ANGLE IRONS on floors and frames extend from middle line to upper deck and to main deck 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 1/8 in. diameter, averaging 5 1/2 ins. from centre to centre.

" Edges of Garboards and to upper part of Bilge, worked clencher, double riveted; with rivets 7/8 in. diameter, averaging 3 3/4 ins. from centre to centre.

" Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3 3/4 ins. from centre to centre.

" { Butts of 2 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/4 thicker than the plates they connect.

" Edges from bilge to Main Sheerstrake, worked clencher, double or single riveted; with rivets 7/8 in. diameter, averaging 3 3/4 ins. from cr. to cr.

" Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 in. diameter, averaging 3 3/4 ins. from cr. to cr.

" Edges of Main Sheerstrake, double or single riveted.

" Butts of Main Sheerstrake, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for 1/2 length.

" 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.

" Breadth of laps of plating in double riveting 5 1/2 to 6 Breadth of laps of plating in single riveting

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted?
Waterway, how secured to Beams (Explain by Sketch, if necessary.)
Beams of the various Decks, how secured to the sides? Times Welded to Beams No. of Breasthooks, 5 Crutches, 4
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Best
Manufacturer's name or trade mark, Messrs. Connell & Co. Phoenix.
The above is a correct description.
Builder's Signature, Charles Connell & Co. Surveyor's Signature, J. Lawrence
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*
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? *In corners of butts only*

21025 *Jan*

Masts, Bowsprit, Yards, &c., are *Now* 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 *Three masts Schooner Rigged.*
Fore Mast & Main Mast in one length 127 1/2 x 24 1/2 x 6 3/8
Main Mast 99 9 x 24 1/2 x 6 3/8
Mizen Mast 74 11 x 22 x 6 3/8
Two plates edges double butts well riveted. Fitted with two angles 3 1/2 x 3 x 7/16 from end to end and two angles 4 1/2 x 3 x 7/16 in way of bracing

NUMBER for EQUIPMENT 31658		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd pr Rule.	Test req'd per Rule.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	Weight req'd per Rule.	Test req'd per Rule.
SAILS.							Bowers	3	36.3.18	33 3/4	36.2.0	33 3/20
CABLES, &c.									36.1.18	33.8.3.0	36.2.0	33 3/20
Chain									31.0.19	29.10.1.7	31.0.0	29 3/20
Fore Sails,												
Fore Top Sails,												
Fore Topmast Stay Sails												
Main Sails,							Stream	1	5.2.26	13.7.2.0	14.0.0	
Main Top Sails,									1.2.15	8.0.2.14	7.0.0	
and							Kedges	2	2.8.8	5.7.2.0	3.2.0	
									0.2.16			

Standing and Running Rigging *Wire & hemp* sufficient in size and *Good* in quality. She has *Two Life Lines* Boats and *4 Others*
The Windlass is *Harfield's Patent* Capstan *3 Steam Winches* and Rudder *Good* Pumps *One 6" Hand Pump & Steam Connection to each compartment*
Engine Room Skylights. How constructed? *Take in Iron House* How secured in ordinary weather?
What arrangements for deadlights in bad weather? *Tarpauline over galvanized iron coats*
Coal Bunker Openings. How constructed? *Cast Iron* How are lids secured? *Self locking* Height above deck? *Flush*
Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *Open rail bulwarks & 7 Scuppers on each side*

Cargo Hatchways. How formed? *Iron Cornings*
State size Main Hatch *15.10 x 10.6* Fore hatch *9.10 x 8.0* Quarter hatch *11.10 x 7.10 & 12.0 x 10.0*
If of extraordinary size, state how framed and secured? *Usual size*
What arrangement for shifting beams? *Sliding beam in Main Hatchway*
Hatches, If strong and efficient? *Yes (Solid)*

Order for Special Survey No. *1253* 1st. On the several parts of the frame, when in place, and before the plating was wrought *1877. April 2. 14. 25. May 3. 15. 30. June 5. 12.*
Date *18th January 1878* 2nd. On the plating during the process of riveting *29. July 10. 25. 30. August 1. 13. 24. September 5. 10.*
Order for Ordinary Survey No. *108* 3rd. When the beams were in and fastened, and before the decks were laid... *11. 21. 27. October 1. 8. 15. 23. 25. 31. Nov 5. 12. 23. 27.*
Date *1878. January 9. 18. 23* 4th. When the ship was complete, and before the plating was finally coated or cemented... *30. Dec 8. 12. 21. 1878. January 9. 18. 23*
No. *108* in builder's yard. 5th. After the ship was launched and equipped *28 Feb 7. 6. 13. 30. March 1. 7. 18. 20. 29. April 3.*

General Remarks (State quality of workmanship, &c.) *17. 26. May 7. 13. 17 & 20*
The workmanship is good, she is built in accordance with the approved drawings attached except that a plate Nelson 14 x 7/16 with two angles 6 1/2 x 4 x 7/16 on upper edge has been substituted for the required Bull at Bilges. The Butt straps of outside strakes of plating from bilge to gunwale for half length amidships extend from frame to frame. Quadruple rivets

Monkey Forecastle 30.0 Bridge House 34.9 x breadth of vessel with passage 3.7 wide through each side. Boiler Casing 34. x 13.8 Engine Casing 23. x 13.8 Deck House 4ft (with passage round it) 94.0 x 21 to 20ft.

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

How are the surfaces preserved from oxidation? Inside *Cement & Paint* Outside *Paint*

I am of opinion this Vessel should be Classed **100A \ True Decked Rule*

The amount of the Entry Fee ... £ 5: 7: 0 is received by me, *22th May 1878*

Special ... £ 89: 13: 0 *May 1878*

Certificate ... *Printed*

(Travelling Expenses, if any, £ 4. 4. 0).

Committee's Minute *24th May 1878.*

Character assigned *100A*
2 Dhs 3 Lrs Buns
2 Lrs 2 Iron Dhs

Surveyor to Lloyd's Register of British and Foreign Shipping.

It is submitted that this vessel appears eligible to be classed 100A as recommended

"28 3 1/2 Bms" 2 Lrs Buns

23/5/78