

IRON SHIP.

15743
Regd 28/1/76

No. 3024 Survey held at Whitehaven Date, First Survey 30th March 1875 Last Survey 11 January 1876
On the Ship "Graduere" Master Olof Anders Wundersmer

TONNAGE under 1179.68
Ditto of Third, Spar, and Running Deck
Ditto of Poop, Round Q. Dk. 71.37
Ditto of Houses on Deck 12.65
Ditto of Forecastle 39.88
Gross Tonnage 1303.58
Less Crew Space 57.69
Net Tonnage 1245.89
Net Tonnage as cut on Beam

ONE, OR TWO DECKED, THREE DECKED VESSEL.
SPAR, OR AWNING DECKED VESSEL.
HALF BREADTH (moulded) 18.0
DEPTH from upper part of Keel to top of Upper Deck Beams 24.25
DEPTH of Half Midship Frame (as per Rule) 36.76
1st NUMBER 79.00
2nd NUMBER 17380
LENGTH 220
PROPORTIONS—Breadths to Length 6.11
Depths to Length—Upper Deck to Keel 9.07
Main Deck ditto

Built at Whitehaven
When built 1875 Launched 11 December
By whom built Whitehaven Shipbuilding Company
Owners Messrs Fisher & Son of Harrington
Port belonging to Liverpool
Destined Voyage Melbourne
If Surveyed while Building, Afloat, or in Dry Dock. while building S. S. N. 232.

Length	Feet.	Inches.	Breadth	Feet.	Inches.	DEPTH	Feet.	Inches.	Power of Engines	No. of Decks with flat laid	No. of Tiers of Beams	
deck as Rule	220		Moulded	36		top of Floors to Upper Deck Beams	22	3		Two	Two	
Dimensions of Ship per Register, length, 226. breadth, 36.1 depth, 22.1												
depth and thickness	Inches in Ship.		Inches per Rule.		Flat Keel Plates, breadth and thickness		Inches. In Ship.		16ths. In Ship.		Inches. required	
Moulding and thickness	9 x 2 1/2		9 x 2 1/2		PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied amidships		36		11		36	
TERN-POST for Rudder do. do.	9 x 2 1/2		8 1/2 x 2 1/2		for half fm up. part of Bilge to lr. edge of Sheerstrake		10				10	
Distance of Frames from moulding edge to moulding edge, all fore and aft	24 inches		24 inches (Class 100 A)		Main Sheerstrake, breadth and thickness of doubling at Sheerstrake, & length applied from Mn. to Up. or Spar Dk. Sheerstrake		11				11	
AMES, Angle Iron, for 1/2 length amidships	5 x 3		5 x 3		Main or Up. or Spar Dk Sheerstrake, breadth & thickness		45		12		40	
Do. for 1/2 at each end	5 x 3		5 x 3		Butt Straps to outside plating, breadth & thickness		14 x 8		13 x 8		14 x 8	
REVERSED FRAMES, Angle Iron	3 1/2 x 3		3 x 3		Lengths of Plating		12 feet					
DOORS, depth and thickness of Floor Plate at mid line for half length amidships	24		10		Shifts of Plating, and Stringers		4 feet					
thickness at the ends of vessel	12		9 1/2		Gunwale Plate on ends of Awning Spar, or Upper Deck Beams, breadth and thickness		44		10		44	
depth at 1/2 the half-bdth. as per Rule	48		48		Angle Iron on ditto		5 x 4		9		5 x 4	
height extended at the Bilges	8 1/2		8 1/2		Tie Plates fore and aft, outside Hatchways		13		10		10	
BEAMS, Upper, Spar, or Awning Deck	3		3		Diagonal Tie Plates on Beams No. of Pairs		3		13		in way of mate	
Angle or double Angle Iron, Plate or Tee Bulb Iron	48		48		Planksheer material and scantling							
Single or double Angle Iron on Upper edge	3		3		Waterways do. do.		Iron gutter cemented					
Average space	48		48		Flat of Upper Deck do. do.		4		4		8	
BEAMS, Main or Middle Deck	9		9		How fastened to Beams		Gambroized iron bolts & nuts		8		8	
Angle or double Angle Iron, Plate or Tee Bulb Iron	3 1/2		3 1/2		Stringer Plate on ends of Main or Middle Deck							
Single or double Angle Iron on Upper edge	48		48		Beams, breadth and thickness							
Average space	48		48		Is the Stringer Plate attached to the outside plating?		Yes					
BEAMS, Lower Deck, Hold, or Orlop	5		5		Angle Irons on ditto, No.		2					
Angle or double Angle Iron, Plate or Tee Bulb Iron	3 1/2		3 1/2		Tie Plates, outside Hatchways							
Single or double Angle Iron on Upper edge	48		48		Diagonal Tie Plates on Beams, No. of pairs							
Average space	48		48		Waterways materials and scantlings							
KEELSONS Centre line, single or double plate, box, or intercostal, Plates	11		12		Flat of Middle Deck do. do.							
" Rider Plate	9		12		How fastened to Beams							
" Bulk Plate to Intercostal Keelson	5		4		Stringer Plates on ends of Lower Deck, Hold or Orlop Beams		32		9		28	
" Angle Irons	5		4		Is the Stringer Plate attached to the outside plating?		Yes					
" Double Angle Iron Side Keelson	5		4		Angle Irons on ditto, No.		2					
" Side Intercostal Plate	5		4		Stringer or Tie Plates, outside Hatchways		13		9		10	
" do. Angle Irons	5		4		Flat of Lower Deck							
" Attached to outside plating with angle iron	3 1/2		3 1/2		Ceiling between Decks, thickness and material		3 1/2 Pine battens					
BILGE Angle Irons	5		4		in hold do. do.		2 1/2					
" do. Bulb Iron	5		4		Main piece of Rudder, diameter at head		6		5 1/4			
" do. Intercostal plates riveted to plating for length	5		4		do. at heel		3 1/4		3			
BILGE STRINGER Angle Irons	5		4		Can the Rudder be unshipped afloat?		Yes					
Intercostal plates riveted to plating for length	5		4		Bulkheads No. 1 Thickness of		1 1/2					
SIDE STRINGER Angle Irons	5		4		Height up to main deck							
Transoms, material. Knight-heads. Hawse Timbers.	Iron		Iron		How secured to sides of ship		double frames					
Endlass Iron Pall Bitt Iron	Iron		Iron		Size of Vertical Angle Irons 3 1/2 x 3 x 3/4 and distance apart		30 ins.					
	Iron		Iron		Are the outside Plates doubled two spaces of Frames in length?		Yes					

The FRAMES extend in one length from Keel to Gunwale Riveted through plates with 1/8 in. Rivets, about 1/2 in. apart.
The REVERSED ANGLE IRONS on floors and frames extend from middle line to Gunwale Stringer and to 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 1/8 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 1/8 in. diameter, averaging 3 1/2 ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 1/8 in. diameter averaging 3 1/2 ins. from centre to centre.
Butts of Strake Strakes at Bilge for half 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 1/8 in. diameter, averaging 3 1/2 ins. from cr. to cr.
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 1/8 in. diameter, averaging 3 1/2 ins. from cr. to cr.
Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.
Butts of Ma Sheerstrake, treble riveted for entire length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.
Butts of Ma Stringer Plate, treble riveted for half length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length
Breadth of laps of plating in double riveting 5 1/4 Breadth of laps of plating in single riveting length
Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? treble and double per Rule
erway, how secured to Beams Riveted (Explain by Sketch, if necessary.) Keelsons connected
ams of the various Decks, how secured to the sides? welded knees riveted to frames No. of Breasthooks Stringers & Crutches at the ends
at description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Angle iron from Stockton Works
ufacturer's name or trade mark, Iron Company beams from Hopkin & Co. floor plates from Condit, Stringer & Mull plates from Kierulff & Condit.
The above is a correct description.
Owner's Signature, Whitehaven Ship Building Co. Limited Surveyor's Signature, J. W. Miles
Surveyor to Lloyd's Register of British and Foreign Shipping.

Workmanship. Are the butts of plating planed or otherwise fitted? *They are 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? *a few in the butts* 15743 Iron

Masts, Bowsprit, Yards, &c., are _____ 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 *The Bowsprit, Fore Main & Mizzen Masts, lower
yards, and lower topsail yards are constructed of Iron, Sketch and dimensions
herewith.*

NUMBER for EQUIPMENT 18530	Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS. N ^o .	Weight. Ex. Stock.	Test per Certificate.	Wght req'd per Rule.	Test req'd per Rule.
SAILS.						Bowers 3	32.0.26	30.6.1.0	32.0.0.0	30.2.0.0
Fore Sails,							32.0.20	30.5.1.0		
Fore Top Sails,							24.0.11			
Fore Topmast Stay Sails							41.2.1		91.1.0	
Main Sails,						Stream ... 1	13.2.7		13.0.0	
Main Top Sails,						Kedges ... 2	6.2.26		6.2.0	
							3.2.0		3.1.0	

Standing and Running Rigging *Winch, Tackle, &c.* sufficient in size and *good* in quality. She has *4* Long Boats and
The Windlass is *good and secure* Capstans *good* and Rudder *good* Pumps *two 4 inch Main Pumps of Metal & 1 Fore Compartment*

Engine Room Skylights. How constructed? *How secured in ordinary weather?*

What arrangements for deadlights in bad weather?

Coal Bunker Openings. How constructed? *How are lids secured?* *Height above deck?*

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? *ports in bulwarks hinged
on each side above the shestrakes, and scuppers thro' the shestrakes level with deck stringer.*

Cargo Hatchways. How formed? *Plate Iron, Comings and hatches of wood.*

State size Main Hatch *15' 9" x 10' 0"* Fore hatch *15' 10" x 6' 0"* Quarter hatch *7' 10" x 6' 0"*

If of extraordinary size, state how framed and secured? *with plates Carlings and half beams*

What arrangement for shifting beams? *a web plate transverse Carling stiffened with angle iron at Middle of Main hatchway*

Hatches, If strong and efficient? *They are.*

Order for Special Survey No. *232*
Date *30 March 1875*
Order for Ordinary Survey No. _____
Date _____
No. *23* in builder's yard.
DATES OF SURVEYS held while building as per Section 18.
1st. On the several parts of the frame, when in place, and before the plating was wrought *Built under Special Survey and seen*
2nd. On the plating during the process of riveting *1875 March 30, May 4, 11, 13, 17, 20, 22, 25, 28, June 2, 4, 8, 11*
3rd. When the beams were in and fastened, and before the decks were laid *16, 18, 22, 26, 30, July 2, 6, 8, 10, 15, 19, 22, 26, 28, 31, August 4, 6, 7, 11, 15*
4th. When the ship was complete, and before the plating was finally coated or cemented *17, 20, 23, 25, 27, 30, Sep- 4, 6, 8, 11, 13, 15, 18, 21, 25, 28, Oct- 4, 7, 12, 15*
5th. After the ship was launched and equipped *18, 22, 25, 26, 28 Nov- 2, 4, 6, 8, 10, 13, 15, 18, 20, 22, 26, 29, Dec- 2, 4, 6, 8, 5*

General Remarks (State quality of workmanship, &c.) *14, 13, 14, 16, 17, 18, 22, 24, 29, 31, - 1876 January 3, 5, 11, 14.*

The edges of the outside strakes of plating as well as all the butts are planed and the general quality of the workmanship good.

This vessel has a full poop with an Iron bulkhead across the front at 3' 6" before the sternpost and the deck extending to 4' 6" before the sternpost, and a Toppallant Forecastle 35' 3", the side plating being 9/16 in thickness, and the beams of angle iron 5 x 4 x 9/16.

A deck house 25' 0" long x 12' 0" in breadth is constructed between the fore and mainmast with Comings 3/16 thick attached to the stringer plates on beams with angle iron, the plating above the Comings 9/16 thick and the whole stiffened with angle iron framing 3 x 3 x 9/16. The deck beams plated over in way of the galley. Extra beams have been fitted in the fore peak and abaft the collision Bulkhead securely attached to the frames, and to the outside plating with stringer plates, knees and angle iron, sufficient in my opinion to prevent parting. This vessel was contracted for before the 30th January 1875 and the scantlings have been compared with the rules then in force.

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

How are the surfaces preserved from oxidation? Inside *Portland Cement to Bulwarks & Paints* Outside *Vaids of Iron & other Paint*

I am of opinion this Vessel should be Classed *100 A 1*

The amount of the Entry Fee ... £ 5 : is received by me, *J. W. Niles*
Special ... £ 56 : 5 : *January 1876*
Certificate ... :
(Travelling Expenses, if any, £ _____).

Committee's Minute *28 January 1876*

Character assigned *100 A 1*

*By J. W. Niles, 3 Bower
At 6 o'clock 20/1/76. CH.*

It is submitted that this vessel appears eligible to be classed 100 A 1
Lloyd's Register
Foundation