

IRON SHIP.

Rev 1/5/73

No. 3643 Survey held at Glasgow

Date, First Survey 8 May 1872

Last Survey 29 April 1873

On the S.S. "Zambesi"

Yard Number 228

Master Cates

TONNAGE under 2365.52

ONE, OR TWO DECKED, THREE DECKED VESSEL.

Built at Glasgow

Tonnage Deck

SPAR, OR AWNING DECKED VESSEL.

When built 1872-1873 Launched 30 Jan'y 1873

Ditto of Third Spar

HALF BREADTH (moulded) 16.25

By whom built Barclay Curle and Co.

on Decking Deck

DEPTH from upper part of Keel to top of Upper Deck Beams 29.41

Owners Peninsular & Oriental Steam Navigation Co.

Ditto of Poop, or Raised Quarter Deck

GIRTH of Half Midship Frame (as per Rule) 42.33

Port belonging to London

Ditto of Houses on Deck

1st NUMBER 89.99

Destined Voyage Not known

Ditto of Forecastle

1st NUMBER, if a THREE-DECKED VESSEL deduct 7 feet 182.99

Surveyed while Building, Afloat, or in Dry Dock.

Gross Tonnage 2421.28

LENGTH 27.233

Less Crew Space 104.36

2nd NUMBER 27.233

Less Engine Room 774.81

PROPORTIONS—Breadths to Length 8.9

Register Tonnage 1542.11

Depths to Length—Upper Deck to Keel 11.15

Main Deck ditto 14.99

LENGTH on deck as per Rule 328.16

BREADTH Moulded 36.50

DEPTH top of Deck to Upper Deck Beams 29.41

Do. do. Main Deck Beams 21.91

Power of Engines 310

Horse. 310

No. of Decks with flat laid 2

No. of Tiers of Beams 3

Dimensions of Ship per Register, length, 33.06 breadth, 36.7 depth, 27.5

	Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	11 + 2 3/4	11 + 2 3/4
STEM, moulding and thickness	11 + 2 3/4	11 + 2 3/4
STERN-POST for Rudder do. do.	11 + 5 1/2	11 + 5 1/2
for Propeller	24 in.	(Class 24 in. A.)
Distance of Frames from moulding edge to moulding edge, all fore and aft	24 in.	(Class 24 in. A.)
FRAMES, Angle Iron, for 1/2 length amidships	5 3/4 9/16	5 3/4 9/16
Do. for 1/2 at each end	5 3/4 9/16	5 3/4 9/16
REVERSED FRAMES, Angle Iron	3 3/4 9/16	3 3/4 9/16
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	23 19/16 22 7/8	19/16 9/16
thickness at the ends of vessel	19/16 9/16	9/16 9/16
depth at 3/4 the half-bdth. as per Rule	19/16 9/16	9/16 9/16
height extended at the Bilges	19/16 9/16	9/16 9/16
BEAMS, Upper, Spar, or Awning Deck	7 3/4 9/16	7 3/4 9/16
Single or double Angle Iron, Plate or Tee Bulb Iron	2 3/4 2 1/2 9/16	2 3/4 2 1/2 9/16
Angle or double Angle Iron on Upper edge	48 in.	48 in.
Average space	48 in.	48 in.
BEAMS, Main or Middle Deck	8 1/2 9/16	8 1/2 9/16
Single or double Angle Iron, Plate or Tee Bulb Iron	3 3 9/16	3 3 9/16
Angle or double Angle Iron on Upper Edge	48 in.	48 in.
Average space	48 in.	48 in.
BEAMS, Lower Deck, Hold or Orlop	9 9/16	9 9/16
Single or double Angle Iron, Plate or Tee Bulb Iron	3 3 9/16	3 3 9/16
Angle or double Angle Iron on Upper Edge	48 in.	48 in.
Average space	48 in.	48 in.
KEELSONS Centre line, single or double plate, box, or intercostal, Plates	21 14/16 21	14/16 14/16
Rider Plate	9 19/16 9	19/16 19/16
Bulb Plate to Intercostal Keelsons	6 1/4 4 9/16	6 1/4 4 9/16
Angle Irons	7/16 9/16	9/16 9/16
Double Angle Iron Side Keelson	7/16 9/16	9/16 9/16
Side Intercostal Plate	7/16 9/16	9/16 9/16
do. Angle Irons	6 1/2 4 9/16	6 1/2 4 9/16
Attached to outside plating with angle iron	3 1/2 3 1/2 9/16	3 1/2 3 1/2 9/16
BILGE Angle Irons	6 1/2 4 9/16	6 1/2 4 9/16
do. Bulb Iron	9 9/16	9/16 9/16
do. Intercostal plates riveted to plating for length	9 9/16	9/16 9/16
STRINGER Angle Irons	6 1/2 4 9/16	6 1/2 4 9/16
Intercostal plates riveted to plating for 3/5 length	9/16 9/16	9/16 9/16
STRINGER Angle Irons	9/16 9/16	9/16 9/16

	Inches in Ship.	16ths in Ship.	Inches required	16ths required
Flat Keel Plates, breadth and thickness	36	12/16	36	12/16
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied	36	12/16	36	12/16
fin up. part of Bilge to lr. edge of Sh'rstrake	36	12/16	36	12/16
Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	36	12/16	36	12/16
Up. or Spar Dk Sh'rstrake, brdth & thickns	36	12/16	36	12/16
Butt Straps to outside plating, breadth & thickness	11 1/2 1/4	11 1/2 1/4	11 1/2 1/4	11 1/2 1/4
Lengths of Plating	10 feet	10 feet	10 feet	10 feet
Shifts of Plating, and Stringers	5 feet	5 feet	5 feet	5 feet
Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	65	9/16	65	9/16
Angle Iron on ditto	4 1/2 4	9/16	4 1/2 4	9/16
Tie Plates fore and aft, outside Hatchways	15	9/16	15	9/16
Diagonal Tie Plates on Beams No. of Pairs	15	9/16	15	9/16
Planksheer material and scantling	3 1/2	3 1/2	3 1/2	3 1/2
Waterways do. do.	4	4	4	4
Flat of Upper Deck do. do.	4	4	4	4
How fastened to Beams	4	4	4	4
Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	73	9/16	73	9/16
Is the Stringer Plate attached to the outside plating?	yes	yes	yes	yes
Angle Irons on ditto, No. 2	4 1/2 4	9/16	4 1/2 4	9/16
Tie Plates, outside Hatchways	15	9/16	15	9/16
Diagonal Tie Plates on Beams, No. of pairs	15	9/16	15	9/16
Waterways materials and scantlings	3 1/2	3 1/2	3 1/2	3 1/2
Flat of Middle Deck do. do.	3 1/2	3 1/2	3 1/2	3 1/2
How fastened to Beams	3 1/2	3 1/2	3 1/2	3 1/2
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	39 1/2	9/16	39 1/2	9/16
Is the Stringer Plate attached to the outside plating?	yes	yes	yes	yes
Angle Irons on ditto, No. 2	4 1/2 4	9/16	4 1/2 4	9/16
Stringer or Tie Plates, outside Hatchways	15	9/16	15	9/16
Flat of Lower Deck	15	9/16	15	9/16
Ceiling betwixt Decks, thickness and material in hold do. do.	2 1/2	2 1/2	2 1/2	2 1/2
Main piece of Rudder, diameter at head do. at heel	7 3/4	7 3/4	7 3/4	7 3/4
Can the Rudder be unshipped afloat?	yes	yes	yes	yes
Bulkheads No. 5 Thickness of	7/16	7/16	7/16	7/16
Height up	11 1/2	11 1/2	11 1/2	11 1/2
How secured to sides of ship	between double angle beams	between double angle beams	between double angle beams	between double angle beams
Size of Vertical Angle Irons	3 1/2 4 3 1/2	3 1/2 4 3 1/2	3 1/2 4 3 1/2	3 1/2 4 3 1/2
and distance apart	30 ins.	30 ins.	30 ins.	30 ins.
Are the outside Plates doubled two spaces of Frames in length?	yes	yes	yes	yes

material. Knight-heads. Hawse Timbers. Iron. Am patent Pall Bitt none.

FRAMES extend in one length from middle line to gunwale. Riveted through plates with 7/8 in. Rivets, about 1/2 apart. REVERSED ANGLE IRONS on floors and frames extend from middle line to above main and to upper 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 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 1/2 ins. from centre to centre.

Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3 1/2 ins. from centre to centre.

Butts of 3 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 7/16 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 1/2 ins. from cr. to cr.

Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets 7/8 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 Main Sheerstrake, treble riveted for 1/2 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted 1/2 length amidships.

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 6 in. Breadth of laps of plating in single riveting 5 in.

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? yes

Waterway, how secured to Beams Butts and screws (Explain by Sketch, if necessary.) No. of Breasthooks, 5 Crutches, 4

Beams of the various Decks, how secured to the sides? Angled pieces on beams

What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Messend

Manufacturer's name or trade mark, Messend Co.

The above is a correct description.

Builder's Signature, Barclay, Curle & Co.

Surveyor's Signature, [Signature]

IRON 454-0008

11305 ERM

Workmanship. Are the butts of plating planed or otherwise fitted? yes
Do the edges of the parvel 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

Masts, Bowsprit, Yards, &c., are Iron and wood 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. Schooner rigged Mast Iron Yards wood
Mizzen Wood

Tested at Low Water Newcastle on Tyne Samples broken
30 July & 1 Aug 1872 by Robert Burnett at 104 and 95.

Tested at Low Water Newcastle on Tyne
29 Aug 71 - 12 Aug 72 - 4 April 73 by Robert Burnett

NUMBER for EQUIPMENT		29531	Fathoms.	Inches.	Test per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
N ^o .	SAILS.	CABLES, &c.											
	Fore Sails,	Chain ...	300	1 7/8	63.5.0.0	1 1/2	13 7/20	Bowers ...	3	34.0.5	31.13.1.21	34.0.11	31 1/20
	Fore Top Sails,	(Machine where Tested, date, and name of Superintendent.)						(Machine where Tested, date, and name of Superintendent.)		33.3.7	31.9.2.21	34.0.11	31 1/20
	Fore Topmast Stay Sails	Hamper Stream Cable Chain	90	1 7/8		1 1/16		Stream ...	1	29.3.14	28.10.2.14	28.3.17	27 1/20
	Main Sails,	Hawser ...	90	1 1/2		11				13.3.8		13 1/2	
	Main Top Sails,	Towlines ...	190	3		7 1/2						13 1/4	
		Warp ...	90	5				Kedges ...	2	6.3.20		3 1/4	
	and	quality <u>good</u>								3.1.10			

Standing and Running Rigging Wire and Hemp sufficient in size and good in quality. She has 7 Long Boats and 2 which are off the bows

The Windlass is Iron patent good Capstan good and Rudder good Pumps good and sufficient

Engine Room Skylights.—How constructed? Iron and thick glass. How secured in ordinary weather? Thick glass and Bars

What arrangements for deadlights in bad weather? Thick dead light

Coal Bunker Openings.—How constructed? Iron castings How are lids secured? by bolts Height above deck? Flush.

Scuppers, &c.—What arrangements for clearing upper deck of water, in case of shipping a sea? Flush deck

Cargo Hatchways.—How formed? Plate and Angle iron

State size Main Hatch 19' 6" x 11' 4" Forehatch 7' 7" x 7' 7" Quarterhatch 11' 6" x 10' 0"

If of extraordinary size, state how framed and secured? Shifting Beams

What arrangement for shifting beams? Socket and nut and screws

Hatches, If strong and efficient? Yes.

Order for Special Survey No. 809 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought under special
Date 25 June 1871 Surveys held 2nd. On the plating during the progress of riveting Survey from the 8 May 1872 until
Order for Ordinary Survey No. ✓ while building 3rd. When the beams were in and fastened, and before the decks were laid on 29 April 1873
Date ✓ as per 4th. When the ship was complete, and before the plating was finally coated or cemented ✓
No. 228 in builder's yard. Section 18. 5th. After the ship was launched and equipped ✓

General Remarks,

This vessel has been built and equipped in accordance with the Workship section attached and in general conformity with the Rules for 1871 & 1872 for the 100 A 1 grade. She has a Workship House over engine and boilers especially constructed. It will be noticed that 1 Down Anchor is a few pounds less than required by Rule but the 3 Down is in excess nearly 1 cwt.

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

How are the surfaces preserved from oxidation? Inside Cement and Paint Outside Paint and Red lead.

I am of opinion this Vessel should be Classed 100 A 1 3 Decked.

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me,

Special ... £ 84 : 3 : 0
Certificate ... Grates

(Travelling Expenses)
(if any) £ 4.4.0.

Committee's Minute 2nd May 1873

Character assigned 100 A 1
Three Decks ATEP
etc.



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