

IRON SHIP.

No. 4731 Survey held at Glasgow Date, First Survey 24th April Last Survey 3rd Oct
On the S. S. "Dunkeld" Master J. Harrison

TONNAGE under Tonnage Deck 1121.48 ONE, OR TWO DECKED, THREE DECKED VESSEL
Ditto of Third, Spar, or Awning Deck - SPAR, OR AWNING DECKED VESSEL.
Ditto of Poop, or Raised Qr. Dk. - HALF BREADTH (moulded)... 16.00 Feet.
Ditto of Houses on Deck 36.13 DEPTH from upper part of Keel to top of Upper Deck Beam 20.87
Ditto of Forecastle - GIRTH of Half Midship Frame (as per Rule) 32.6
1st NUMBER 69.3
2nd NUMBER 16539
1st NUMBER, if a THREE DECKED VESSEL -
2nd NUMBER 16539
LENGTH 1238.67
2nd NUMBER 16539
PROPORTIONS—Breadth to Length 7.45
Depths to Length—Upper Deck to Keel -
Main Deck ditto 11.53

Built at Glasgow
When built 1878 Launched 29th Aug 1877
By whom built R. Napier & Sons
Owners D. Currie & Co.
Port belonging to London
Destined Voyage Cape Coast Trader
and
If Surveyed while Building, Afloat, or in Dry Dock -

LENGTH on deck as per Rule 238 Feet. 8 1/4 Inches. BREADTH—Moulded... 32 Feet. 0 Inches. DEPTH top of Floors to Upper Deck Beams 18 Feet. 10 1/2 Inches. Do. do. Main Deck Beams... 18 Feet. 10 1/2 Inches. Power of Engines 150 Horse. N° of Decks with flat laid Two N° of Tiers of Beams Two

Dimensions of Ship per Register, length, 240.85 breadth, 32.32 depth, 18.85

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	8 1/2 x 2 1/2	8 1/2 x 2 1/2	FLAT KEEL PLATES, breadth and thickness	36	11
STEM, moulding and thickness	8 x 2 1/2	8 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	10.9	10-9
STERN-POST for Rudder do. do. for Propeller	8 x 5	8 x 5	from up part of Bilge to edge of Sheerstrake	40	13
Distance of Frames from moulding edge to moulding edge, all fore and aft	23	23	Main Sheerstrake, breadth and thickness of doubling at Sheerstrake, & length applied from Mn. to Up. or Spar Dk. Sheerstrake	-	-
FRAMES, Angle Iron, for 1/2 length amidships	4 1/2 x 3	4 1/2 x 3	Up. or Spar Dk. Sheerstrake, breadth & thickness	-	-
Do. for 1/2 at each end	4 1/2 x 3	4 1/2 x 3	Butt Straps to outside plating, breadth & thickness	16 1/4 x 9 1/4	14-9 1/4
REVERSED FRAMES, Angle Iron	3 x 3	3 x 3	Lengths of Plating	11.6	9 1/4
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	21 x 9	21 x 9	Shifts of Plating, and Stringers	Two spaces	Two spaces
thickness at the ends of vessel	-	-	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	-	-
depth at 3/4 the half-bdth. as per Rule	10 1/2	10 1/2	Angle Iron on ditto	-	-
height extended at the Bilges	Twice	Twice	Tie Plates fore and aft, outside Hatchways	-	-
BEAMS, Upper, Spar, or Awning Deck	-	-	Diagonal Tie Plates on Beams No. of Pairs	-	-
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	-	-	Plank-sheer material and scantling	-	-
Single or double Angle Iron on Upper edge	-	-	Waterways do. do.	-	-
Average space	-	-	Flat of Upper Deck do. do.	-	-
BEAMS, Main, or Middle Deck	-	-	How fastened to Beams	-	-
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	7 1/2 x 7	7 1/2 x 7	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	50	10
Single, or double Angle Iron, on Upper Edge	3 x 3	3 x 3	Is the Stringer Plate attached to the outside plating?	Yes	Yes
Average space	46	46	Angle Irons on ditto, No. 1	5 x 3 1/2 x 9	5 x 3 1/2 x 9
BEAMS, Lower Deck, Hold, or Orlop	-	-	Tie Plates, outside Hatchways	12	10
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	7 1/2 x 7	7 1/2 x 7	Diagonal Tie Plates on Beams, No. of pairs	-	-
Single or double Angle Iron on Upper Edge	3 x 3	3 x 3	Waterways materials and scantlings	Gutter	3 3/8
Average space	46	46	Flat of Middle Deck do. do.	3 3/8	3 3/8
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	16 x 12	16 x 12	How fastened to Beams	Nuts and screws	-
" Rider Plate	11 x 12	11 x 12	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	31	9
" Bulb Plate to Intercoastal Keelson	-	-	Is the Stringer Plate attached to the outside plating?	Yes	Yes
" Angle Irons	5 3/2 x 9	5 3/2 x 9	Angle Irons on ditto, No. 2	4 x 4 x 8	4 x 4 x 8
" Double Angle Iron Side Keelson	5 3/2 x 9	5 3/2 x 9	Stringer or Tie Plates, outside Hatchways	12	9
" Side Intercoastal Plate	-	-	Flat of Lower Deck	2 3/4	2 3/4
" do. Angle Irons	3 x 3	3 x 3	Ceiling betwixt Decks, thickness and material in hold	2 1/2	2 1/2
" Attached to outside plating with angle iron	3 x 3	3 x 3	do. Pitch Pine	5 3/4	5 3/4
BILGE Angle Irons	5 3/2 x 9	5 3/2 x 9	Main piece of Rudder, diameter at head do. at heel	3	3
" do. Bulb Iron	-	-	Can the Rudder be unshipped afloat?	Yes	Yes
" do. Intercoastal plates riveted to plating for 3/5 length	-	-	Bulkheads No. 7 Thickness of	6	6
BILGE STRINGER Angle Irons	5 3/2 x 9	5 3/2 x 9	Height up <u>6</u> no. to upper deck 1 to lower deck	-	-
Intercoastal plates riveted to plating for length	-	-	How secured to sides of ship	By double frames	-
SIDE STRINGER Angle Irons	-	-	Size of Vertical Angle Irons <u>3 x 3 x 7/16</u> and distance apart <u>30</u> ins.	-	-

Transoms, material. Knight-heads. Hawse Timbers. Iron

Windlass Harfield's Patent Pall Bitt -

The FRAMES extend in one length from Keel to Gunwale Riveted through plates with 3/4 in. Rivets, about 6 apart.

The REVERSED ANGLE IRONS on floors and frames extend from middle line to lower 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 1/8 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 4 ins. from centre to centre.

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

Butts of Three 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 1/4 riveted; with rivets 3/4 in. diameter, averaging 3 3/8 ins. from cr. to cr.

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

Edges of Main Sheerstrake, double or 1/4 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 length amidships.

Butts of Main Stringer Plate, treble riveted for 1/2 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 -

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or 1/4 Riveted?

Waterway, how secured to Beams Gutter (Explain by Sketch, if necessary.)

Beams of the various Decks, how secured to the sides? By Pins turned down No. of Breasthooks, Five Crutches, Five

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

Manufacturer's name or trade mark, Angles Mossend, Plates Consett

The above is a correct description.

Builder's Signature, James Harrison Surveyor's Signature, Saml Laphorne

Surveyor to Lloyd's Register of British and Foreign Ships

IRON 480-0301

Workmanship. Are the butts of plating planed or otherwise fitted? *Planed*
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*

21819 Iron

Masts, ~~Yards~~, &c., are *all* 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 *Two masts Schooner Rigged*

Consent iron, mast plate quality, hot and cold heated } Fore Mast ^{length} 100 extreme 76 of iron with 24 ft pole of wood } 22 at part } 2 plates in Circle } 605 double riveted } 16 } eyes, treble butts }

NUMBER for EQUIPMENT 16539		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	No.	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
One suit	SAILS.						Bowers	1	24.1.13	24.4.0.7	21	21 12/20
	Fore Sails,	Chain	240	19 1/16	43 7/10	240-18 1/16	40 7/10	Stock	5.0.18			
	Fore Top Sails,	12 Sept 178 E. R. Saitt			61 4/10	58 7/10		Stock	23.1.5	23.8.0.14	21	21 12/20
	Fore Topmast Stay Sails	Hmpn Strm Cbl	92	18	45-15 1/16	15 8/10		Stock	4.3.6			
	Main Sails,	Hawser ...	90	8	90-10 1/2			Stock	20.2.0	21.3.3.0	18	19
	Towlines	Warp ...	180	5	90-9			Stock	4.1.7			
	Main Top Sails,	Warp ...	180	4	90-5 1/2			Stock	1.3.18	6.4.2.0	3 1/2	5 8/20
and		quality	180	4			Kedges	1	1.3.11	4.7.0.21	13 1/4	44 4/20
								Stock	2.23			
								Total	68.0.78	Total	60	
							Stream	1	8.0.4	10.5.0.0	7 1/4	9 9/20
								Stock	1.3.24			
								Stock	3.3.18	6.4.2.0	3 1/2	5 8/20
								Stock	1.1.3	4.7.0.21	13 1/4	44 4/20
								Stock	2.23			

Standing and Running Rigging *Wire & Hemp* sufficient in size and *good* in quality. She has *Five* Boatswain (2 fitted with buoyancy)
The Windlass is *Good* Capstan *and* Rudder *Good* Pumps *Good and efficient*

Engine Room Skylights. How constructed? *Teak framing outtop of iron house* How secured in ordinary weather? *By bars*

What arrangements for deadlights in bad weather? *Teak shutters*

Coal Bunker Openings. How constructed? *Circular castings* How are lids secured? *Screwed* Height above deck? *Flush*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *4 scuppers & 5 water ports each side*

Cargo Hatchways. How formed? *Plate and angle iron*

State size Main Hatch *15.3 x 10'* Forehatch *7.8' x 8.2'* Quarterhatch *7.8' x 10.2'*

If of extraordinary size, state how framed and secured? } *A divisional web plate beam at main hatch*

What arrangement for shifting beams?

Hatches, If strong and efficient? *Yes*

Order for Special Survey No. <i>1366</i>	DATES of Surveys held while building as per Section 16.	1st. On the several parts of the frame, when in place, and before the plating was wrought	1878 - April 24, May 3, 6, 8, 11, 14, 16, 21, 22, 29, 31
Date <i>Aug 14/78</i>		2nd. On the plating during the process of riveting	June 1, 3, 7, 11, 14, 19, 21, 28 July 2, 9
Order for Ordinary Survey No. <i>368</i>		3rd. When the beams were in and fastened, and before the decks were laid...	July 23, 25, 31. Aug 5, 9, 12, 16, 21, 28
Date <i>Aug 14/78</i>		4th. When the ship was complete, and before the plating was finally coated or cemented...	Aug 29, Sept 6, 14, 21, 26, 30
No. <i>368</i> in builder's yard.		5th. After the ship was launched and equipped	Oct 3

General Remarks (State quality of workmanship, &c.)

The workmanship is of good quality - Built in accordance with the approved sketches of midship and longitudinal sections herewith and in general conformity with the Rules with a view to the grade contemplated

Fitted with after house on deck 25 x 10 - Midship iron casing 51 x 10 with wing cabins covered with Bridge Deck 57 ft long, Companion forward 9.6' x 7.0' and anchor flat 21 ft long

The water ballast tank aft as originally proposed has been since changed and is fitted between after bulkheads for about 23 ft in length as per sketch marked A herewith; which has been efficiently carried out and properly tested

State if one, two, or three, decked vessel, or if spar, or running 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 *Cement and Paint* Outside *Paint*

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

The amount of the Entry Fee ... £ 5 : : : is received by me, *Saml. Lanthorn*

Special ... £ 53 : : : 6 October 1878

Certificate ... *Printed*

(Travelling Expenses, if any, £ ...)

Committee's Minute *8th October, 1878.*

Character assigned *100 A 1*

