

# IRON SHIP.

No. 4010 Survey held at Glasgow Date, First Survey 25 September Last Survey 7 April 1875

On the SHIP "AIRLIE"

Master John Raftern

TONNAGE under } 1391.72 ~~ONE, OR TWO DECKED, THREE DECKED VESSEL.~~

Built at Glasgow

Ditto of Deck } 108.42

When built 1875 Launched 11 March 75

Ditto of Poop, } 26.17

By whom built A. Stephen & Sons

Ditto of Houses } 51.21

Owners David Bruce & others

Ditto of Forecastle } 1577.52

Port belonging to Dundee

Gross Tonnage } 77.98

Destined Voyage San Francisco

Less Crew Space } 1499.54

If Surveyed while Building, Afloat, or in Dry Dock.

Register Tonnage } 1499.54

While Building Special Survey

Register Tonnage } 1499.54

as out on Beam }

LENGTH on deck as per Rule 234 <sup>Feet.</sup> 75 <sup>Inches.</sup> BREADTH Moulded 30 <sup>Feet.</sup> 0 <sup>Inches.</sup> DEPTH top of Floors to Upper Deck Beams 22 <sup>Feet.</sup> 11 <sup>Inches.</sup> Do. do. Main Deck Beams 22 <sup>Feet.</sup> 11 <sup>Inches.</sup> Power of Engines 10 Horse. No. of Decks with flat laid TWO No. of Tiers of Beams TWO

Dimensions of Ship per Register, length, 246.3 breadth, 38.3 depth, 22.85

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	9 1/2 x 2 1/2	9 1/2 x 2 1/2	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	36 x 12/16	36 x 12/16
STEM, moulding and thickness	9 x 2 1/2	9 x 2 1/2	THREE of Bilge, increased thickness, and length applied	11/16 - 12/16	11/16 - 12/16
STERN-POST for Rudder do. do.	7 1/2 x 3 1/4	9 x 2 1/2	fm up. part of Bilge to Ir. edge of Sh'rstrake	10/16 - 11/16	10/16 - 11/16
Distance of Frames from moulding edge to moulding edge, all fore and aft	24 in	(Class 100 A)	Main Sheerstrake, breadth and thickness	40 x 13/16	40 x 13/16
FRAMES, Angle Iron, for 1/2 length amidships	5 3/4 x 8/16	5 3/4 x 8/16	Up. of Sh'rstrake, breadth and thickness	11/16 - 12/16	11/16 - 12/16
Do. for 1/2 at each end	5 3/4 x 7/16	5 3/4 x 7/16	Butt Straps to outside plating, breadth & thickness	11/16 - 12/16	11/16 - 12/16
REVERSED FRAMES, Angle Iron	3 1/2 x 3 7/16	3 1/2 x 3 7/16	Lengths of Plating	5 x SPACES	FIVE SPACES
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	2 1/2 x 10/16	2 1/2 x 10/16	Shifts of Plating, and Stringers	TWO SPACES	TWO SPACES
thickness at the ends of vessel	AS PER SECTION	8/16	Gunwale Plate on ends of	48 x 10/16	47 x 10/16
depth at 1/2 the half-bdth. as per Rule	TWICE DEPTH	8/16	Upper Deck Beams, breadth and thickness	5 1/2 x 9/16	5 1/2 x 9/16
height extended at the Bilges			Angle Iron on ditto	11 x 10/16	11 x 10/16
BEAMS, Upper, <del>or</del> <u>Angle</u> Deck	9 x 9/16	9 x 9/16	Tie Plates fore and aft, outside Hatchways	31 x 9/16	30 1/2 x 9/16
Single or double Angle Iron, Plate or Bulb Iron	3 1/2 x 3 7/16	3 1/2 x 3 7/16	Diagonal Tie Plates on Beams No. of Pairs		
Average space	4 feet	4 feet	Planksheer material and scantling		
BEAMS, Main, or Middle Deck	9 1/2 x 9/16	9 1/2 x 9/16	Waterways do. do.	3 CUTTER	CUTTER
Single or double Angle Iron, Plate or Bulb Iron	3 1/2 x 3 7/16	3 1/2 x 3 7/16	Flat of Upper Deck do. do.	4 7/8	4
Average space	4 feet	4 feet	How fastened to Beams	Bolts and nuts	
BEAMS, Lower Deck, Bulk or Deck	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Stringer Plate on ends of Main or Middle Deck		
Single or double Angle Iron, Plate or Bulb Iron	3 1/2 x 3 7/16	3 1/2 x 3 7/16	Beams, breadth and thickness		
Average space	4 feet	4 feet	Is the Stringer Plate attached to the outside plating?	YES	
BEAMS, Lower Deck, Bulk or Deck	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Angle Irons on ditto, No. 2	4 x 4 x 9/16	4 x 4 x 9/16
Single or double Angle Iron, Plate or Bulb Iron	3 1/2 x 3 7/16	3 1/2 x 3 7/16	Tie Plates, outside Hatchways	11 x 9/16	11 x 9/16
Average space	4 feet	4 feet	Diagonal Tie Plates on Beams No. of pairs		
KEELSONS Centre line, single or double plate, <del>or</del> <u>Angle</u> Iron	17 3/4 x 13/16	17 1/2 x 13/16	Waterways materials and scantlings	GUTTER	
" Rider Plate	12 x 10/16	11 3/4 x 10/16	Flat of Middle Deck do. do.	3 Feet	
" Deck Plate to Intermediate Keelson	5 1/2 x 4 9/16	5 1/2 x 4 9/16	How fastened to Beams	Bolts and nuts	
" Angle Irons	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Stringer Plate on ends of Lower Deck, Hatchways		
" Double Angle Iron Side Keelson	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Is the Stringer Plate attached to the outside plating?		
" Side Intercoastal Plate	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Angle Irons on ditto, No. 2	4 x 4 x 9/16	4 x 4 x 9/16
" do. Angle Irons	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Stringer or Tie Plates, outside Hatchways		
" Attached to outside plating with angle iron	3 1/2 x 3 7/16	3 x 3 7/16	Planksheer material		
BILGE Angle Irons	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Ceiling betwixt Decks, thickness and material	Bottom reduce	
" do. <del>or</del> <u>Angle</u> Iron	5 1/2 x 4 9/16	5 1/2 x 4 9/16	in hold do. do.	2 1/2 x 7/8	2 1/2
" do. <del>or</del> <u>Angle</u> Iron	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Main piece of Rudder, diameter at head	6 1/4	6 1/4
" do. <del>or</del> <u>Angle</u> Iron	5 1/2 x 4 9/16	5 1/2 x 4 9/16	do. at heel	3 1/2	3 1/4
BILGE STRINGER Angle Irons	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Can the Rudder be unshipped afloat?	NO	
" do. <del>or</del> <u>Angle</u> Iron	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Bulkheads No. <u>one</u> Thickness of <u>7/16</u>		
" do. <del>or</del> <u>Angle</u> Iron	5 1/2 x 4 9/16	5 1/2 x 4 9/16	Height up <u>Upper deck</u>		
SIDE STRINGER Angle Irons	5 1/2 x 4 9/16	5 1/2 x 4 9/16	How secured to sides of ship <u>Double frames</u>		
Transoms, material. Knight-heads. Hawse Timbers. <u>Iron plates riveted</u>			Size of Vertical Angle Irons <u>5 1/2 x 3 7/16</u> and distance apart <u>30</u> ins.		
Windlass <u>Iron Patent</u> Fall Bitt			Are the outside Plates doubled two spaces of Frames in length? <u>yes</u>		

The FRAMES extend in one length from Keel to gunwale Riveted through plates with 7/8 in. Rivets, about 6 apart.

The REVERSED ANGLE IRONS on floors and frames extend across middle line to above lower strake and to gunwale 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 clench, 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 Three Strakes at Bilge for Bag length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.

Edges from bilge to Main Sheerstrake, worked clench, double ~~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 ~~single~~ riveted. Upper Sheerstrake, double or single riveted.

Butts of Main Sheerstrake, treble riveted for Bag length amidships. Plate of Upper or Spar Sheerstrake, treble riveted length amidships.

Butts of Main Stringer Plate, treble riveted for Bag length amidships. Plate of Upper or Spar Stringer Plate, treble riveted length amidships.

Breadth of laps of plating in double riveting 5 1/4 Breadth of laps of plating in single riveting 5 1/4

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double and Treble as per rule

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

Beams of the various Decks, how secured to the sides? Beams ends riveted to frame No. of Breasthooks, 5 Crutches, 3

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

Manufacturer's name or trade mark, "Fox Head" "Hales" "Morse and"

The above is a correct description.

Builder's Signature, Ally Stephen & Sons Surveyor's Signature, James P. Ford

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



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

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? *None fast and in butts only.*

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 *Fore 88 feet x 3 in. Main 91 feet x 3 in. Mizzen 81 feet x 2 7/8 in.*

*Three plates in the round 5/16 to 3/8. (Mizzen 7/16 to 1/2.) Edges double butts. Butts riveted.*

*Three angles in each mast. 3 1/2 x 3 1/2 x 8 ft. 7 1/2 feet in the main & 3 1/2 feet in Mizzen.*

*Bowsprit 41 feet x 3 1/2 in. Three plates in the round 7/8 to 1, edges double butts. Butts riveted.*

NUMBER for EQUIPMENT <i>20.572</i>		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
N <sup>o</sup> .	SAILS.	Chain		270	1 7/8	63 1/4	270.178	63 5/20	Bowers			
	Fore Sails,	River Main Com.		37	2 1/2	75	1 1/2	1 1/2	34.0.25	31 1/2	34	31 1/2
	Fore Top Sails,	Hampn Strm Cbl		90	1	—	90.1	—	34.0.2	31 1/2	34	31 1/2
	Fore Topmast Stay Sails	Hawser ...		90	10	—	90.10	—	29.1.0	28 1/2	28.3.17	27 1/2
	Main Sails,	Towlines ...		90	6	—	90.6	—	Stream ...	1	13.2.0	—
	Main Top Sails,	Warp ...		120	4 1/2	—	90.6	—	Kedges ...	2 1/2	6.3.0	—
and		quality <i>good</i>		70	3 1/2	—	—	—	3.1.7	—	3 1/4	—

Standing and Running Rigging *Wire Ropes* sufficient in size and *good* in quality. She has *2 Life Line* Boats and *3* others.

The Windlass is *Iron Patent*. Capstan *no* and Rudder *good* Pumps *Iron Cast Iron*

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? *Six square ports on each side*

Cargo Hatchways.—How formed? *Iron beams*

State size Main Hatch *16 x 10* Forehatch *8 x 7* Quarterhatch *6 x 6*

If of extraordinary size, state how framed and secured? *—*

What arrangement for shifting beams? *Shifting beam built down and angled*

Hatches, If strong and efficient? *yes*

Order for Special Survey No. <i>100</i>	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	<i>1874. September 25. 29 October 1. 6. 9. 16. 19</i>
Date <i>Aug. 29</i>		2nd. On the plating during the process of riveting	<i>21. 26. 29 Nov. 3. 6. 10. 13. 17. 20. 23. 28. Dec. 1. 5. 9. 11</i>
Order for Ordinary Survey No. <i>—</i>		3rd. When the beams were in and fastened, and before the decks were laid...	<i>15. 18. 22. 26. 29. 31. 1875 Jan. 12. 15. 21. 26. 29</i>
Date <i>—</i>		4th. When the ship was complete, and before the plating was finally coated or cemented...	<i>Feb. 2. 6. 9. 12. 16. 19. 22. 27. March 2. 5. 9</i>
No. <i>180</i> in builder's yard.		5th. After the ship was launched and equipped	<i>12. 16. 20. 27. 30 April 2 and 7</i>

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

*Fore Main yards 82 feet x 20 in. Five plates in the round 5/16 to 3/8. Iron. Same as fore.*

*ditto. L. L. yards 68 x 16 in. ditto. 5/16 to 3/8. Butts riveted.*

*Concealed yards 66 x 16 in. ditto. 5/16 to 3/8.*

*Mizzen Lower Lopsail 54 x 17 1/2 ditto. 4/16. 3/16.*

*Has been constructed in accordance with approved midship sections.*

*Midship Section  
with Report on  
Parramatta  
Jan 14/59*

*Deck Beams 40 x 17 feet*

State if *one*, two, or *three*, decked vessel, or if *open*, or *awning* deck, and the lengths of poop, fore-castle, and main quarter-deck, and the lengths of deck, or part deck, bottom.

How are the surfaces preserved from oxidation? Inside *Cement in bottom. Paint above* 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, *James Dundie*

Special ... £ *62* : *10* : : *Apr. 6. 1875*

Certificate ... *Grants*

(Travelling Expenses, if any, £ *—*).

Committee's Minute *9th April 1875*

Character assigned *100 A. 1.*

*This vessel appears eligible to be classed as recommended viz 100 A. 1.*

*20th*

*Lloyd's Register*

*Foundation*