

# IRON SHIP.

No. 4038 Survey held at Dundee Date, First Survey 28<sup>th</sup> Sept 76 Last Survey 16<sup>th</sup> May 1877  
 On the S. S. "Britannia" Master W<sup>m</sup>. Speedy

GE under 789.95 ONE, OR TWO DECKED, THREE DECKED VESSEL.  
 ne Deck Spar, or Awning-DECKED VESSEL.  
 or } 91.82 HALF BREADTH (moulded)... .. 14.4  
 or } 24.30 DEPTH from upper part of Keel to top of Upper Deck Beams 18.3  
 31.67 GIRTH of Half Midship Frame (as per Rule) ... .. 28.3  
 937.74 1st NUMBER ... .. 61.3  
 43.65 1st NUMBER, if a THREE-DECKED VESSEL  
 894.09 LENGTH ... .. 253.5  
 333.20 2nd NUMBER ... .. 15539.5  
 560.89 PROPORTIONS—Breadths to Length ... .. 8.6  
 Depths to Length—Upper Deck to Keel ... .. 13.85  
 Main Deck ditto ... ..

Built at Dundee.  
 When built 1876-77. Launched 17<sup>th</sup> May 77  
 By whom built Gaulay Bros & Co  
 Owners Dundee, Perth & London Shipping Co  
 Port belonging to Dundee  
 Destined Voyage London.  
 If Surveyed while Building, Afloat, or in Dry Dock.  
While Building & Afloat.

Feet. Inches. BREADTH—Moulded... 29 5 DEPTH top of Floors to Upper Deck Beams... 16 9 Power of Engines ... 250 Horse. No. of Decks with flat laid Two No. of Tiers of Beams Two & Bridge Deck

Ship per Register, length, 254.8 breadth, 29.5 depth, 16.7

	Inches in ship.	Inches per Rule.
nd thickness ... ..	8 1/2 x 2 1/2	8 1/2 x 2 1/2
ading and thickness... ..	8 1/2 x 2 1/2	8 x 5
OST for Rudder do. do. ... ..	9 x 4 1/2	8 x 5
for Propeller ... ..	9 x 4 1/2	8 x 5
f Frames from moulding edge to edge, all fore and aft ... ..	23	(Class 100A)
ngle Iron, for 1/2 length amidships ... ..	4 3 7	4 3 7
at each end ... ..	4 3 6	4 3 6
FRAMES, Angle Iron ... ..	3 3 6	3 3 6
epth and thickness of Floor Plate) ... ..	18 1/2 x 8	17 1/2 x 8
me for half length amidships ... ..	18 1/2 x 8	17 1/2 x 8
ickness at the ends of vessel ... ..	9	8 3/4
epth at 3/4 the half-bdth. as per Rule ... ..	36	35
eight extended at the Bilges... ..	4 x 7	7 x 7
Upper, Spar, or Awning Deck) ... ..	4 x 7	7 x 7
ouble Angle Iron, Plate or Tee Bulb Iron) ... ..	3 3 6	3 3 6
ouble Angle Iron on Upper edge ... ..	46	46
space... ..		
Main, or Middle Deck ... ..		
ouble Ang. Iron, Plate or Tee Bulb Iron) ... ..	6 x 6	6 x 6
ouble Angle Iron on Upper Edge ... ..	2 1/2 2 1/2 5	2 1/2 2 1/2 5
space... ..	46	46
NS Centre line, single or double plate, } ... ..	8	8
ox, or Intercoastal, Plates ... ..		
Plate ... ..		
b Plate to Intercoastal Keelson ... ..	9 x 7	9 x 7
gle Irons ... ..	5 3 1/2 9	5 3 1/2 9
Double Angle Iron Side Keelson ... ..		
Side Intercoastal Plate ... ..	5 3 1/2 9	5 3 1/2 9
do. Angle Irons ... ..	5 3 1/2 9	5 3 1/2 9
attached to outside plating with angle iron ... ..	3 3 6	3 3 6
ngle Irons ... ..	5 3 1/2 9	5 3 1/2 9
o. Bulb Iron... ..	7 x 7	7 x 7
o. Intercoastal plates riveted to plating for length ... ..		
STRINGER Angl Irons ... ..	5 3 1/2 9	5 3 1/2 9
Intercoastal plates riveted to plating for length ... ..		
STRINGER Angle Irons ... ..		

	Inches. In Ship.	16ths. In Ship.	Inches. per Rule.	16ths. per Rule.
Flat Keel Plates, breadth and thickness ... ..	35	11	34	11
PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges of doubling at Bilge, or increased thickness, and length applied ... ..	35 1/2 x 16 7/8	35 1/2 x 16 7/8	35 1/2 x 16 7/8	35 1/2 x 16 7/8
fm up. part of Bilge to l. edge of Sh'rstrake	9-10		9-10	
Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn to Up. or Spar Dk. Sh'rstrake.	36 12	36	12	
Up. or Spar Dk Sh'rstrake, brdth & thickness	20 9 9	20	9	9
Butt Straps to outside plating, breadth & thickness	9 1/2 x 11 1/2	9 1/2 x 11 1/2	9 1/2 x 11 1/2	9 1/2 x 11 1/2
Lengths of Plating ... ..	5 frame & 1/2	5 frame & 1/2	5 frame & 1/2	5 frame & 1/2
Shifts of Plating, and Stringers... ..	2		2	
Gunwale Plate on ends of Awning Spar, or Upper Deck Beams, breadth and thickness... ..	50 11	50	11	
Angle Iron on ditto 2- 1/2 1- 5/2 x 3 1/2 x 9/16, 1- 5/2 x 3 1/2 x 9/16	5 x 3 1/2 x 9/16	5 x 3 1/2 x 9/16	5 x 3 1/2 x 9/16	5 x 3 1/2 x 9/16
Tie Plates fore and aft, outside Hatchways	12 9	12	9	
Diagonal Tie Plates on Beams No. of Pairs, Planksheer material and scantling ... ..				
Waterways do. do. ... ..	2 1/2		2 1/2	
Flat of Upper Deck do. do. ... ..	4 Pine	4		
How fastened to Beams ... ..	6 bolts 5			
Stringer Plate on ends of Main or Middle Deck) ... ..				
Beams, breadth and thickness ... ..				
Is the Stringer Plate attached to the outside plating?				
Angle Irons on ditto, No. ... ..				
Tie Plates, outside Hatchways ... ..				
Diagonal Tie Plates on Beams, No. of pairs				
Waterways materials and scantlings ... ..				
Flat of Middle Deck do. do. ... ..				
How fastened to Beams ... ..				
Stringer Plates on ends of Lower Deck, Hold or Orlop Beams ... ..	30 9	30	8	
Is the Stringer Plate attached to the outside plating?	30		20 6	
Angle Irons on ditto, No. two each 4 x 4 x 8/16	4 x 4 x 8/16	4 x 4 x 8/16	4 x 4 x 8/16	4 x 4 x 8/16
Stringer or Tie Plates, outside Hatchways	12 9	12	9	
Flat of Lower Deck ... ..	3 1/2 Pine	3 1/2		
Ceiling betwixt Decks, thickness and material ... ..	2 1/2	2 1/2		
in hold do. do. ... ..	2 1/2	2 1/2		
Main piece of Rudder, diameter at head ... ..	53 1/4	53 1/4		
do. at heel ... ..	3	3		
Can the Rudder be unshipped afloat? 300				
Bulkheads No. 6 Thickness of	6-5		6-5	

material. Knight-heads. Hawse Timbers. plates & angles.  
Iron, Harfield's (Brakers) Patent.  
 IES extend in one length from Keel to main & Bridge rail  
 ERSED ANGLE IRONS on floors and frames extend across middle line to 6 above lower deck and to main deck  
 NS. Are the various lengths of Plates and Angle Irons properly connected? Yes. And butts properly shifted? Yes.  
 G. Garboard, double riveted to Keel, with rivets 1/8 in. diameter, averaging 5 7/8 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 1/4 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 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 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. 7/8 R. Upper Sheerstrake, double or single riveted.  
 Butts of Main Sheerstrake, double riveted for whole length amidships; Butts of Upper or Spar Stringer Plate, treble riveted for length amidships.  
 Butts of Main Stringer Plate, treble riveted for 1/2 length amidships.  
 Breadth of laps of plating in double riveting 5 1/4 Breadth of laps of plating in single riveting 3 1/2  
 t Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Treble & Double Riveted.  
 erway, how secured to Beams By Sails? See bolts (Explain by Sketch, if necessary).  
 ms of the various Decks, how secured to the sides? Solid welded knees. No. of Breasthooks, 2 Crutches, 1  
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Good.  
 Manufacturer's name or trade mark, all angles from D. Colville, Coatbridge; Bulbs from D. Colville & all plates from  
Connell Iron Co.  
 The above is a correct description.  
 Builder's Signature, Gaulay Bros & Co Surveyor's Signature, J. L. Dimmick  
 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 rearing, 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*

Masts, Bowsprit, Yards, &c., are *Wood & Iron* in *good* condition, and sufficient in size and length. If of Iron or Steel Scantlings of Plating, Angle Irons, &c., and further explain by a Sketch showing how the lower Masts and Bowsprit are constructed, & the number of Plates and Angle Irons, mode of riveting, quality of Materials, and if stamped with Maker's name. *yes* Can State also Length and Diameter of Lower Masts and Bowsprit *Fore Mast, Length Extreme of Iron Mast 84.3; Diam at 84 1/2" thick; Main Mast, Length Extreme of Iron Mast 83.6; Diam at 84 1/2" thick; Mizzen Mast, Length Extreme of Iron Mast 83.6; Diam at 84 1/2" thick.*

*Fore Mast, Length Extreme of Iron Mast 84.3; Diam at 84 1/2" thick; Main Mast, Length Extreme of Iron Mast 83.6; Diam at 84 1/2" thick; Mizzen Mast, Length Extreme of Iron Mast 83.6; Diam at 84 1/2" thick.*

*18356 Iron*

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate.	Length & Size req'd per Rule.	Test req'd per Rule.	ANCHORS.	No.	Weight. Ex. Stock.	Test per Certificate.	Weight req'd per Rule.
14093		270	1 7/8	43 3/4	270-1 7/8	43 3/4	Bowers	1	24.1.24	24.6.1.0	23 1/2 Car.
N <sup>o</sup> .											
SAILS.											
CABLES, &c.											
Chain											
Fore Sails,											
Fore Top Sails,											
Fore Topmast Stay Sails											
Hmpn Strm Cbl											
Hawser ...											
Towlines ...											
Warp											
quality											

Standing and Running Rigging *Wire & Hemp* sufficient in size and *good* in quality. She has *2-26ft. Luff* Boat and *2-25ft. Luff* Mast.

The Windlass is *Good & efficient*, Capstan *efficient* and Rudder *efficient* Pumps *efficient*; *3-7" and 1-3"*

Engine Room Skylights.—How constructed *of Oak, in Iron Frames*. How secured in ordinary weather? *By bolts*.

What arrangements for deadlights in bad weather? *none req'd being on bridge deck, strong close wire guards*

Coal Bunker Openings.—How constructed? *Circular Glazings*. How are lids secured? *Screwed*. Height above deck? *5 ft*

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

*five pair of ports and three pair of scuppers*

Cargo Hatchways.—How formed? *plate huddled & Comings fitted on fore & after on Car*

State size Main Hatch *13-6 x 9-0* Forehatch *9-6 x 7-0* Quarterhatch *11-6 x 9-0*

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams? *strong wood fore & after in each*

Hatches, If strong and efficient? *yes*

Order for Special Survey No. <i>343</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	1876: Sept. 28; Oct. 6. 11. 16. 23. 27.
Date <i>13<sup>th</sup> Dec/76</i>		2nd. On the plating during the process of riveting	Nov. 8. 9. 15. 27. 30; Dec. 4. 8. 11.
Order for Ordinary Survey No. <i>79</i>		3rd. When the beams were in and fastened, & before the deck was laid	22. 27. 1877. Jan 12. 15. 18. 19. 26.
Date <i>7<sup>th</sup> Feb/77</i>		4th. When the ship was complete, and before the plating was finally coated or cemented.	Feb. 7. 13. 16. 23. 28; Mar 9. 11. 18.
No. <i>79</i> in builder's yard.		5th. After the ship was launched and equipped	April 3. 4. 6. 10. 18. 26; May 2. 9.

General Remarks (State quality of workmanship, &c.) *Workmanship and materials good*

*This vessel is intended to trade between Dun*  
*and London and has been constructed in accordance*  
*with the accompanying tracings &c. submitted*  
*approved Sec. Secy's Letters 24<sup>th</sup> June, 20 July, & 4<sup>th</sup>*  
*1876; she has a top gall<sup>ty</sup> fore-castle, bridge deck and*  
*full poop with beams of single angles 4 1/2 x 3 x 6 1/16, str*  
*26 3/4 x 6 1/16; tie plates 9 x 6 1/16; flat of fore-castle and*  
*poop 3" thick of bridge deck 2 1/2 thick.*  
*Strong hold, beams fitted in way of Engine & Boiler space where she*  
*the long elevators and the upper deck in way of Engine, Space entirely cov*  
*with 7/16 plating.*

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 top.

How are the surfaces preserved from oxidation? Inside *Cemented to upper part of bilge* Outside *2 Coats of red lead*

I am of opinion this Vessel should be Classed *MA.*

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

*Mar 18* Special ... £ 44 : 14 : " *Mar 18-1877*

Machinery Certificate ... " : 5 : "

(Travelling Expenses, if any, £ ...)

Committee's Minute *22<sup>nd</sup> May* 1877

Character assigned *100A*

*Lloyd's Regs*

*J. R. Dimmett*

*Lloyd's Regs*