

# IRON SHIP.

No. 806 Survey held at Port Glasgow Date, First Survey 23<sup>rd</sup> Nov 80 Last Survey 12<sup>th</sup> Sept 1881  
 On the 4 masted Ship "Ben Douran"

TONNAGE under Tonnage Deck	1779.88	ONE, OR TWO DECKED, THREE DECKED VESSEL,
of Poop, or covered Or. Dh.	5.14	<del>SPAR, OR AWNING DECKED VESSEL.</del>
of Houses on Deck	97.01	Feet.
to of Forecastle	15.83	Half Breadth (moulded) .. . . . . .
Tonnage new Spars	54.19	Depth from upper part of Keel to top of Upper Deck Beams
Less Engine Room	1950.05	Girth of Half Midship Frame (as per Rule) .. . . . . .
Register Tonnage as cut on Beam	78.79	1st Number .. . . . . .
	1841.26	1st Number, if a 3-Decked Vessel .. deduct 7 feet
		Length .. . . . . .
		2nd Number .. . . . . .
		Proportions— Breadths to Length .. . . . . .
		Depths to Length— Upper Deck to Keel .. . . . . .
		Main Deck ditto .. . . . . .

Master James Shaw  
 Built at Port Glasgow  
 When built 1880-81 Launched 25<sup>th</sup> Aug 81  
 By whom built Henry Murray & Co  
 Owners Napson Brothers  
 Residence Oswald Street Glasgow  
 Port belonging to Glasgow  
 Destined Voyage San Francisco  
 If Surveyed while Building, Afloat, or in Dry Dock. While Building afloat

LENGTH on deck as per Rule	268	BREADTH— Moulded	40	DEPTH top of Floors to Upper Deck Beams	23	Power of Engines	11	N <sup>o</sup> . of Decks with flat laid	Two	N <sup>o</sup> . of Tiers of Beams	Two
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	Inches in Ship	Inches per Rule						
Flat Keel Plates, breadth and thickness	10x2 3/4	10x2 3/4						
PLATES in Garboard Strakes, br'dth & thickness	40	13	40	13	40	13	40	13
From Garboard to upper part of Bilges	—	11	—	11	—	11	—	11
Of d'bling at Bilge, or increased thickness, and length applied	—	12	—	12	—	12	—	12
From up. prt of Bilge to h. edge of Sh'rstrake	—	11	—	11	—	11	—	11
Main Sheerstrake, breadth and thickness	42	13	42	13	42	13	42	13
Of d'bling at Sh'stk. & Ing. applied	—	—	—	—	—	—	—	—
From M'n. to Upr. or Spar Dk. Sh'rstrake	—	—	—	—	—	—	—	—
Up. or Spar Dk Sh'rstrake, br'dth & thic'k'ns.	9 1/2	11 1/2	9 1/2	11 1/2	9 1/2	11 1/2	9 1/2	11 1/2
Butt Straps to outside plating, breadth & thickness	9	10 1/2	9	10 1/2	9	10 1/2	9	10 1/2
Lengths of Plating	See frame spaces	—						
Shifts of Plating, and Stringers	2 x 3	—	2 x 3	—	2 x 3	—	2 x 3	—
Gunwale Plate on ends of Awning Spar, or Upper Deck Beams, breadth and thickness	38	10	38	10	38	10	38	10
Angle Iron on ditto	6x4x9	6x4x9	6x4x9	6x4x9	6x4x9	6x4x9	6x4x9	6x4x9
Tie Plates fore and aft, outside Hatchways	15	10	15	10	15	10	15	10
Diagonal Tie Plates on Beams No. of Pairs	15	10	15	10	15	10	15	10
Flat of Up., Spar, or Awning Dk. How fastened to Beams	Wood flat	—						
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.	3 1/2	Hold						
Tie Plates, outside Hatchways	2 1/2	9 1/2	2 1/2	9 1/2	2 1/2	9 1/2	2 1/2	9 1/2
Diagonal Tie Plates on Beams, No. of pairs	—	—	—	—	—	—	—	—
Flat of Middle Deck* do. do.	—	—	—	—	—	—	—	—
How fastened to Beams	—	—	—	—	—	—	—	—
Stringer Plates on ends of Lower Deck, Hold or Beams	39	9	39	9	39	9	39	9
Is the Stringer Plate attached to the outside plating?	Yes	—	Yes	—	Yes	—	Yes	—
Angle Irons on ditto, No.	4x4x9	4x4x9	4x4x9	4x4x9	4x4x9	4x4x9	4x4x9	4x4x9
Stringer or Tie Plates, outside Hatchways	15	10	15	10	15	10	15	10
Flat of Lower Deck* Part laid off white pine	3	—	3	—	3	—	3	—
One pt of diag tie plates to fore beam	15	10	15	10	15	10	15	10
Ceiling betwixt Decks, thickness and material	2 J.P.P.	—						
in hold do. do.	3 1/2 P.P.	—						
Main piece of Rudder, diameter at head	6 1/2	—	6 1/2	—	6 1/2	—	6 1/2	—
do. at heel	3 1/2	—	3 1/2	—	3 1/2	—	3 1/2	—
Can the Rudder be unshipped afloat?	Yes	—	Yes	—	Yes	—	Yes	—
Bulkheads No. One No. per Rule	One	—	One	—	One	—	One	—
Thickness of	6 1/2	—	6 1/2	—	6 1/2	—	6 1/2	—
Height up	upper deck	—						
How secured to sides of ship	Double frames	—						
Size of Vertical Angle Irons	3 1/2 x 3 1/2 x 8	—	3 1/2 x 3 1/2 x 8	—	3 1/2 x 3 1/2 x 8	—	3 1/2 x 3 1/2 x 8	—
and distance apart	30	—	30	—	30	—	30	—
Are the outside Plates doubled two spaces of Frames in length?	Yes	—	Yes	—	Yes	—	Yes	—

KEELSONS extend in one length from Keel to gunwale Riveted through plates with 7/8 in. Rivets, about 7 apart.  
 REVERSED ANGLE IRONS on floors and frames extend from middle line to upper deck stringer on every frame, alternately  
 CONNECTIONS. Are the various lengths of Plates and Angle Irons properly connected? Yes And butts properly slitted? Yes  
 G. Garboard, double riveted to Keel, with rivets 1 1/2 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 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 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 single riveted.  
 Butts of Main Sheerstrake, treble riveted for half length amidships. Butts of Upper or Spar Sheerstrake, treble riveted ✓ length amidships.  
 Butts of Main 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 1/2 x 4 1/2 Breadth of laps of plating in single riveting ✓  
 Connections of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? Double No. of Breasthooks, Five Crutches, Five.  
 Description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Foot  
 Manufacturer's name or trade mark, all bulbs & angles. Darlington & Moorhead Glasgow  
 The above is a correct description.  
 Builder's Signature, Henry Murray & Co Surveyor's Signature, J. Dawkins  
 Surveyor to Lloyd's Register of British and Foreign Shipping.

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

Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies?  
 Are the fillings between the ribs and plates solid single pieces?  
 Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other?  
 Are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces?  
 Do any rivets break into or through the seams or butts of the plating?

*Planed*

*Yes  
Yes  
Yes  
Yes  
Yes a few in the butts*

Masts, Bowsprit, Yards, &c., are *Steel Iron 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

*The masts are made of Steel from the Steel Co of Scotland; the whole of which was duly tested & stamped as required by the Committee's Circular. The Bowsprit is of B.B. iron from Motherwell. The sizes & arrangement being in accordance with the amended Plan & Rigging plan accompanying*

NUMBER for EQUIPMENT		Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS, N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	Wght req'd per Rule.	Machine where Tested & Suprntd.
SAILS.											
N <sup>o</sup> .	CABLES										
	Chain	135 1/2	2	40	270	Glasgow	Bower Anchors 331	38.1.2	31.13.0.14	38.0.0	34.10.0.0
	Fore Sails,	135 1/2					335	38.1.2	31.13.0.14	38.0.0	
	Fore Top Sails,						330	32.1.14	30.8.0.14	32.1.0	
	Fore Topmast Stay Sails,	90	4	33	75	4th ed. wire					
	Main Sails,	120	3 1/2		90	3 1/2 ed. wire					
	Main Top Sails,	90	7		90	7 ed. wire					
	and others	90									
	quality						Stream Anchor 332	11.2.0	13.4.2.0	11.2.0	13.7.0.0
							Kedge ... 333	5.2.25	8.0.2.14	5.3.0	8.5.0
							2nd Kedge ... 334	2.3.0	5.5.0.0	2.3.0	5.5.0.0

Reference should be made to any correspondence connected with the case.

Standing and Running Rigging *G.S. Wire Manila* sufficient in size and *good* in quality. She has *Turkish* Boat and *two others*.  
 The Windlass is *Emerson Walker's* Capstan *good* and Rudder *good* Pumps *good*.

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 Scuppers 24 ports each side*

Cargo Hatchways.—How formed? *Comings of plates 8/16 thick + 30 ins above deck.*

State size Main Hatch *19.10 x 12.0* Forehatch *15.10 x 12.0* Quarterhatch *8.0 x 8.0*

If of extraordinary size, state how framed and secured? *As per deck plan.*

What arrangement for shifting beams? *a deep web plate in the fore main + 3 fore rafters in each*

Hatches, If strong and efficient? *Yes! 3 ins solid*

Order for Special Survey No.	Date	Order for Ordinary Survey No.	Date	No. in builder's yard.	DATES of Surveys held while building as per Section 18.	1st.	2nd.	3rd.	4th.	5th.
100	16 March 1881			105		1st. On the several parts of the frame, when in place, and before the plating was wrought	2nd. On the plating during the process of riveting	3rd. When the beams were in and fastened, and before the decks were laid...	4th. When the ship was complete, and before the plating was finally coated or cemented.	5th. After the ship was launched and equipped

General Remarks (State quality of workmanship, &c.) *This vessel has been constructed in accordance with the accompanying approved sketches &c. of Midship section longitudinal & deck plans, and in all other respects with the Rule.*

*The Workmanship & materials are of a very good quality and she is in my opinion eligible to be classed as stated below*

State if one, two, or three decked vessel, or if spar, or awning decked; and the lengths of poop, bridge, forecabin, or raised quarter deck. (If double bottom, state particulars on separate form.)

How are the surfaces preserved from oxidation? Inside *Cement & oxide of iron* Outside *Red & white lead paint*

I am of opinion this Vessel should be Classed *\*100 A.S.*

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me,  
 Special ... £ 41 : 15 : 0  
 Certificate ... 0 : 0 : 0  
 (to be sent as per margin)

Committee's Minute *Tuesday, September, 20th 18.81.*

Character assigned *100 A.S.*

*J. Dowling*  
 Surveyor to Lloyd's Register of British and Foreign Shipping.  
 The vessel having been built in accordance with the Rules approved and published by the Register of Shipping.

The Surveyors are requested not to write on or below the space for Committee's Minute.