

IRON SHIP.

No. *3306* Survey held at *Glasgow* Date, First Survey *5th Aug 1880* Last Survey *15th Feb 81* 1881
On the *S. S. "Garth Castle"* Master *M. R. Webster*

TONNAGE under Tonnage Deck *2549.39* ONE, OR TWO DECKED, THREE DECKED VESSEL.
Ditto of Third, Spar, or Awning Deck. *988.07* SPAR, OR AWNING DECKED VESSEL.
Ditto of Poop, or Raised Or. Deck. *3537.46*
Ditto of Houses on Deck. *167.54*
Ditto of Forecastle. *-*
Gross Tonnage *3705.00*
Less Crew Space *138.69*
Less Engine Room *1185.60*
Register Tonnage *2380.71*
as cut on Beam

HALF BREADTH (moulded) *21.6*
DEPTH from upper part of Keel to top of Upper Deck Beams *33.5*
GIRTH of Half Midship Frame (as per Rule) *48.5*
1st NUMBER *103.6*
2nd NUMBER *35065*
PROPORTIONS—Breadths to Length *8.4*
Depths to Length—Upper Deck to Keel *10.8*
Main Deck ditto *14.1*

Built at *Glasgow*
When built *1880-81* Launched *16th Dec 1880*
By whom built *J. Elder & Co.*
Owners *D. Currie & Co.*
Port belonging to *London*
Destined Voyage *Cape of Good Hope (via London)*
Surveyed while Building, Afloat, or in Dry Dock. *✓*
Built under Special Survey

LENGTH on deck as per Rule *363* **BREADTH** Moulded *43 2 1/2* **DEPTH** top of Floors to Upper Deck Beams *31 4* **Power of Engines** *500* **No. of Decks with flat laid** *Three*
Do. do. Main Deck Beams *23 6 1/2* **No. of Tiers of Beams** *Three*

Dimensions of Ship per Register, length, *365* breadth, *43.5* depth, *31.3*

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
KEEL , depth and thickness	11 x 3	11 x 3	PLATES in Garboard Strakes, breadth and thickness from Garboard to upper part of Bilges	13	13	Butt Straps to outside plating, breadth & thickness	27 1/2 x 17 1/2	12 19 1/2 x 14 1/2			
STEM , moulding and thickness	11 x 3	11 x 3	" of doubling at Bilge, or increased thickness, and length applied	12	12	Lengths of Plating	12 feet	10 feet			
STERN-POST for Rudder do. do.	11 x 6	11 x 6	" fm up. part of Bilge to l. edge of Sh'rstrake.	12	12	Shifts of Plating, and Stringers	2 spaces	2 spaces			
" for Propeller	11 x 6	11 x 6	" Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mid. to Up. or Spar Dk. Sh'rstrake.	55 14	40 13	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	54 9	54 9			
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	" Up. or Spar Dk. Sh'rstrake, breadth & thickness	18 15	13 14	Angle Iron on ditto	8 x 4 x 9	8 x 3 1/2 x 9			
FRAMES , Angle Iron, for 2/3 length amidships	5 1/2 x 3 1/2	9 5 1/2 x 3 1/2	Butt Straps to outside plating, breadth & thickness	27 1/2 x 17 1/2	12 19 1/2 x 14 1/2	Tie Plates fore and aft, outside Hatchways	Beams plated with 7/16 iron plates, covered with 3/16 lead	Beams plated with 7/16 iron plates, covered with 3/16 lead			
Do. for 1/3 at each end	5 1/2 x 3 1/2	8 5 1/2 x 3 1/2	Lengths of Plating	12 feet	10 feet	Diagonal Tie Plates on Beams No. of Pairs	3 1/2 feet	3 1/2 feet			
REVERSED FRAMES , Angle Iron	4 3/2	8 4 3/2	Shifts of Plating, and Stringers	2 spaces	2 spaces	Planksheer material and scantling	3 1/2 feet	3 1/2 feet			
FLOORS , depth and thickness of Floor Plate at mid line for half length amidships	26 x 10	26 x 10	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	54 9	54 9	Waterways do. do. Gutter					
thickness at the ends of vessel	13	13	Angle Iron on ditto	8 x 4 x 9	8 x 3 1/2 x 9	Flat of Upper Deck do. do.					
depth at 2/3 the half-bdth. as per Rule	13	13	Tie Plates fore and aft, outside Hatchways	Beams plated with 7/16 iron plates, covered with 3/16 lead	Beams plated with 7/16 iron plates, covered with 3/16 lead	How fastened to Beams	Riveted	Nuts and Screws			
height extended at the Bilges	9 x 3	9 x 3	Diagonal Tie Plates on Beams No. of Pairs	3 1/2 feet	3 1/2 feet	Stringer Plate on ends of Main or Middle Deck	54 10	54 10			
BEAMS , Upper, Spar, or Awning Deck	10 x 11	10 1/2 x 10	Planksheer material and scantling	3 1/2 feet	3 1/2 feet	Beams, breadth and thickness					
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	4 3/2	8 4 3/2	Waterways do. do. Gutter			Is the Stringer Plate attached to the outside plating?	Yes	Yes			
Single or double Angle Iron on Upper edge	4 3/2	8 4 3/2	Flat of Upper Deck do. do.			Angle Irons on ditto, No. 2	4 x 4 x 9	4 x 4 x 9			
Average space	48	48	How fastened to Beams	Riveted	Nuts and Screws	Diagonal Tie Plates on Beams, No. of pairs	Beams plated with 7/16 iron plates, covered with 3/16 lead	Beams plated with 7/16 iron plates, covered with 3/16 lead			
BEAMS , Main or Middle Deck	10 x 11	10 1/2 x 10	Stringer Plate on ends of Main or Middle Deck	54 10	54 10	Waterways materials and scantlings	3 1/2 feet	3 1/2 feet			
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	4 3/2	8 4 3/2	Beams, breadth and thickness			Flat of Middle Deck do. do.	3 1/2 feet	3 1/2 feet			
Single or double Angle Iron, on Upper Edge	4 3/2	8 4 3/2	Is the Stringer Plate attached to the outside plating?	Yes	Yes	How fastened to Beams					
Average space	48	48	Angle Irons on ditto, No. 2	4 x 4 x 9	4 x 4 x 9	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	48 9	48 9			
BEAMS , Lower Deck, Hold, or Orlop	10 x 11	10 1/2 x 10	Stringer or Tie Plates, outside Hatchways	19 9	19 9	Is the Stringer Plate attached to the outside plating?	Yes	Yes			
Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	4 3/2	8 4 3/2	Flat of Lower Deck	Beams plated with 7/16 iron plates, covered with 3/16 lead	Beams plated with 7/16 iron plates, covered with 3/16 lead	Angle Irons on ditto, No. 2	4 x 4 x 9	4 x 4 x 9			
Single or double Angle Iron on Upper Edge	4 3/2	8 4 3/2	Ceiling betwixt Decks, thickness and material	2 1/2	2 1/2	Stringer or Tie Plates, outside Hatchways	19 9	19 9			
Average space	48	48	" in hold American Elm & Red Pine	2 1/2	2 1/2	Flat of Lower Deck	Beams plated with 7/16 iron plates, covered with 3/16 lead	Beams plated with 7/16 iron plates, covered with 3/16 lead			
KEELSONS Centre line, single or double plate, box, or intercostal plates	28 3/4 x 14	28 3/4 x 14	Main piece of Rudder, diameter at head	8 1/2	8 1/2	Ceiling betwixt Decks, thickness and material	2 1/2	2 1/2			
" Rider Plate (foundations plate 18 x 10)	14 x 14	14 x 14	do. at heel	4 1/2	4 1/2	" in hold American Elm & Red Pine	2 1/2	2 1/2			
" Bulb Plate to intercostal Keelson	11 x 10	11 x 10	Can the Rudder be unshipped afloat?	Yes	Yes	Can the Rudder be unshipped afloat?	Yes	Yes			
" Angle Irons	6 1/2 x 4 1/2	9 6 1/2 x 4 1/2	Bulkheads No. 8 Thickness of	7-6		Angle Irons on ditto, No. 2	4 x 4 x 9	4 x 4 x 9			
" Double Angle Iron Side Keelson	6 1/2 x 4 1/2	9 6 1/2 x 4 1/2	" Height up Foreward and No 2 to upper deck, remainder to main deck			Stringer or Tie Plates, outside Hatchways	19 9	19 9			
" Side Intercostal Plate	3 1/2 x 3 1/2	8 3 1/2 x 3 1/2	How secured to sides of ship	13 1/2 double frames		Flat of Lower Deck	Beams plated with 7/16 iron plates, covered with 3/16 lead	Beams plated with 7/16 iron plates, covered with 3/16 lead			
" do. Angle Irons	3 1/2 x 3 1/2	8 3 1/2 x 3 1/2	Size of Vertical Angle Irons	4 x 3 1/2 x 8 1/2	and distance apart 30 ins.	Ceiling betwixt Decks, thickness and material	2 1/2	2 1/2			
" Attached to outside plating with angle iron			Are the outside Plates doubled two spaces of Frames in length?	Yes		" in hold American Elm & Red Pine	2 1/2	2 1/2			
BILGE Angle Irons	6 1/2 x 4 1/2	9 6 1/2 x 4 1/2				Main piece of Rudder, diameter at head	8 1/2	8 1/2			
" do. Bulb Iron	11 x 10	11 x 10				do. at heel	4 1/2	4 1/2			
" do. Intercostal plates riveted to plating for 220 length						Can the Rudder be unshipped afloat?	Yes	Yes			
BILGE STRINGER Angle Irons	6 1/2 x 4 1/2	9 6 1/2 x 4 1/2				Bulkheads No. 8 Thickness of	7-6				
Intercostal plates riveted to plating for 11 x 10 for 150 feet, whole length						" Height up Foreward and No 2 to upper deck, remainder to main deck					
SIDE STRINGER Angle Irons	6 1/2 x 4 1/2	9 6 1/2 x 4 1/2				How secured to sides of ship	13 1/2 double frames				
Built 11 x 10 for 150 feet, whole length						Size of Vertical Angle Irons	4 x 3 1/2 x 8 1/2	and distance apart 30 ins.			
Transoms, material. Knight-heads. Hawse Timbers.						Are the outside Plates doubled two spaces of Frames in length?	Yes				
Windlass <i>Napiers Patent</i> Pall Bitt											

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 from middle line to above main deck 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 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 3/8* ins. from centre to centre.
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *3 3/8* 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 *single* riveted; with rivets *7/8* in. diameter, averaging *3 3/8* ins. from cr. to cr.
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 3/8* 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 *5 1/2* *and* Breadth of laps of plating in single riveting *5 1/2*

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or *single* Riveted?
Waterway, how secured to Beams *Gutter* (Explain by Sketch, if necessary.)
Beams of the various Decks, how secured to the sides? *By knees turned down* No. of Breasthooks, *Five* Crutches, *Four*
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Best*
Manufacturer's name or trade mark, *Anglo "Mansard" and "Coats" Plate "Consalt", Clydesdale & Dixon, Bulbs "Morse"*

The above is a correct description.
Builder's Signature, *John Egan & Co.* Surveyor's Signature, *Saml. Laphroa*
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 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 5306 925

Masts, Bowsprit, 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 13 rig rigged

Consett Iron
Main Mast 90.0 x 29.24 21.18 1/2
Fore Mast 101.6 x 29.21.21.18 1/2
Fore & Main Lower Yards 70 x 17 1/4 - 9
Three plates in circle 7 1/2 x 1/2 with 3 angles extending
whole length 3 1/2 x 3 1/2, double riveted lands
tackle riveted built, double at points
Two plates in circle 5 to 3/4 single riveted eyes, bridle
riveted built, double at points

NUMBER for EQUIPMENT		37606	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested & Suprntd.
N ^o .	SAILS.	CABLES &c.											
		Chain 45728	300	2 1/4	91 1/8	300-2 1/4	1/16 25 Oct 1880	Bower Anchors	5556	44.1.1.14	38.17.0.21	40	29 Oct 1880
	Fore Sails,	(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	Breaking		127 5/16			(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)	5557	43.1.1.20	38.5.0.0	40	29 Oct 1880
	Fore Top Sails,	Iron Str'm Chain	90	13/16	25 3/8	90-13/16	do		5558	38.2.1.14	34.17.3.7	34	29 Oct 1880
	Fore Topmast Stay Sails,	Ditto do.	Breaking		38		21 Oct 1880			7.3.16			
			90	4" Steel		90-12"		Total =	126.1.2.0		Total	114	
		Hmpn Strm Cbl	90	3" Steel		90-12"		Stream	5554	13.2.1.1	15.5.3.21	12	29 Oct 1880
		Hawser ...	90	3" Steel		90-12"				8.0.7			
	Main Sails,	Towlines	90	2 1/2" Steel		90-8"		Kedge	5553	6.3.4	9.2.2.0	6	29 Oct 1880
			90	12 Manila		90-8"				1.2.15			
	Main Top Sails,	Warp						Ditto	5552	3.1.1.14	5.16.2.7	3	29 Oct 1880
	and 4 spare	quality New	180	8 - do						3.14			
			180	7 - do									

Standing and Running Rigging Wire & Hemp sufficient in size and good in quality. She has Eight ~~Yard~~ Boats and (4 with buoyancy)

The Windlass is Good Capstan Good and Rudder Good Pumps Good and efficient as per

Engine Room Skylights. How constructed? Seal framing over iron house on above deck How secured in ordinary weather? By Bars.

What arrangements for deadlights in bad weather? Thick glass, metal bars and Paulines

Coal Bunker Openings. How constructed? Circular Castings How are lids secured? Locked Height above deck? Flush

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? Open Bulwarks and Scuppers for drainage

Cargo Hatchways. How formed? Plate and angle iron

State size Main Hatch 15' 9" x 13' Fore hatch 12' x 10' Quarter hatch 8' x 12'

If of extraordinary size, state how framed and secured? Portable Beam at Main Hatch

What arrangement for shifting beams? Yes

Hatches, If strong and efficient? Yes

Order for Special Survey No. <u>5713</u>	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	1880, Aug 5. 11. 12. 20. 25. 26. 27. 28
Date <u>25. Aug 1880</u>		2nd. On the plating during the process of riveting	Sept. 3. 6. 7. 9. 10. 13. 15. 16. 20. 21. 24. 28
Order for Ordinary Survey No. <u>245</u>		3rd. When the beams were in and fastened, and before the decks were laid....	29. 30 Oct 4. 6. 11. 13. 15. 20. 22. 23. 27
Date <u>1. Nov 1880</u>		4th. When the ship was complete, and before the plating was finally coated or cemented..	Nov 3. 5. 8. 11. 15. 18. 19. 22. 25. 30
No. <u>245</u> in builder's yard.		5th. After the ship was launched and equipped	Dec 2. 4. 10. 14. 16. 21. 23. 28 1881 - Jan. 12. 17. 21. 25. 31 Feb. 4. 7. 11. 15

General Remarks (State quality of workmanship, &c.) The workmanship is of good quality. Built in accordance with the approved sketches of midship section, Profile, Sketch of arrangement in way of Engines and Boilers and battast tanks, Plan of Forecastle anchor deck, Bridge plan, and Pumping arrangements and in general conformity with the Rules with a view to the grade contemplated.

The after water battast tank is 40 feet long fitted to the height of top of tunnel contains about 160 tons, the midship water battast compartment is 20 feet long top 10 1/4 above keel contains about 230 tons, have been properly tested and found satisfactory

Fitted with open anchor Forecastle deck 48 feet long, Bridge 96 feet long having side houses underneath, iron casing amidships between bridge and upper deck over Engines and Boilers 46 feet long

After Cabin of wood 68 x 14

State if one, two, or three decked vessel, or if spar, or running decked; and the lengths of open fore-castle, open anchor deck 48 feet long, and the length of double 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 "Three Decked Rule"

The amount of the Entry Fee ... £ 5 : - : - is received by me, Paul J. W.

Special ... £ 114 : 3 : - 11. Feb. 1881

Certificate ... Grades

(Travelling Expenses, if any, £ 6. 6. 0.)

Committee's Minute Friday, February, 1881

Character assigned 100 A 1

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