

# IRON SHIP.

(Received at London Office,

17 AUG 88

No. 9560 Survey held at *Port Glasgow* Date, First Survey *20th Sept. 87* Last Survey *13th August 1888*  
On the *Iron barque "Tinto Hill"* 4 Masted barque

TONNAGE under Tonnage Deck *2002.15*  
Ditto of Third, Spar, or Avoing Deck *89.89*  
Ditto of Poop, or Raised Or. Dk. *18.81*  
Ditto of Houses on Deck *83.42*  
Gross Tonnage *2144.27*  
Less Crew Space *77.01*  
Less Engine Room *2067.26*  
Register Tonnage as cut on Beam *2067.26*

ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AVOING DECKED VESSEL.

Half Breadth (moulded) *20.12*  
Depth from upper part of Keel to top of Upper Deck Beams *27.0*  
Girth of Half Midship Frame (as per Rule) *42.20*  
1st Number *89.32*  
2nd Number *23937*  
Length *268*  
Proportions— Breadths to Length *6.66*  
Depths to Length—Upper Deck to Keel *9.92*

Master *J. Hall '84 - '88*  
Built at *Port Glasgow*  
When built *1888* Launched *26th July 1888*  
By whom built *Russell & Co.*  
Owners *J. R. Dickson & Co.*  
Residence *Glasgow*  
Port belonging to *Glasgow*  
Destined Voyage *Melbourne*  
If Surveyed while Building, Afloat, or in Dry Dock. *Built under Special Survey*

LENGTH on deck as per Rule	Feet. Inches.	BREADTH Moulded	Feet. Inches.	DEPTH top of Floors to Upper Deck Beams	Feet. Inches.	Power of Engines	Horse.	No. of Decks with flat laid	No. of Tiers of Beams
<i>268</i>		<i>40 3</i>		<i>24 10</i>				<i>One</i>	<i>Two</i>
Dimensions of Ship per Register, length, <i>268.1</i> breadth, <i>40.5</i> depth, <i>24.6</i>									
KEEL, depth and thickness		Inches in Ship	Inches per Rule						
STEM, moulding and thickness		<i>10 x 2 3/4</i>	<i>10 x 2 3/4</i>						
STERN-POST for Rudder do. do.		<i>10 x 2 3/4</i>	<i>10 x 2 3/4</i>						
" " for Rudder		<i>10 x 2 3/4</i>	<i>10 x 2 3/4</i>						
Distance of Frames from moulding edge to moulding edge, all fore and aft		<i>24</i>	<i>24</i>						
FRAMES, Angle Iron, for 1/2 length amidships		<i>5 1/2 x 3 1/2</i>	<i>8</i>	<i>5 1/2 x 3 1/2</i>	<i>8</i>				
Do. for 1/4 at each end		<i>3 1/2 x 3 1/2</i>	<i>7</i>	<i>3 1/2 x 3 1/2</i>	<i>7</i>				
REVERSED FRAMES, Angle Iron		<i>3 1/2 x 3 1/2</i>	<i>7</i>	<i>3 1/2 x 3 1/2</i>	<i>7</i>				
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships		<i>26</i>	<i>10</i>	<i>26</i>	<i>10</i>				
" thickness at the ends of vessel		<i>13</i>	<i>8</i>	<i>13</i>	<i>8</i>				
" depth at 3/4 the half-bdth. as per Rule		<i>13</i>	<i>8</i>	<i>13</i>	<i>8</i>				
" height extended at the Bilges		<i>5 1/2</i>	<i>8</i>	<i>5 1/2</i>	<i>8</i>				
BEAMS, Upper, Spar or Avoing Deck		<i>9 1/2</i>	<i>9</i>	<i>9 1/2</i>	<i>9</i>				
Single or double Angle Iron, Plate on Tee Bulb Iron		<i>3 1/2 x 3 1/2</i>	<i>7</i>	<i>3 1/2 x 3 1/2</i>	<i>7</i>				
Single or double Angle Iron on Upper edge		<i>4 8</i>		<i>4 8</i>					
Average space		<i>4 8</i>		<i>4 8</i>					
BEAMS, Main, or Middle Deck		<i>10 1/2</i>	<i>9</i>	<i>10 1/2</i>	<i>9</i>				
Single or double Angle Iron, Plate on Tee Bulb Iron		<i>3 1/2 x 3 1/2</i>	<i>7</i>	<i>3 1/2 x 3 1/2</i>	<i>7</i>				
Single or double Angle Iron on Upper edge		<i>4 8</i>		<i>4 8</i>					
Average space		<i>4 8</i>		<i>4 8</i>					
BEAMS, Lower Deck		<i>10 1/2</i>	<i>9</i>	<i>10 1/2</i>	<i>9</i>				
Single or double Angle Iron, Plate on Tee Bulb Iron		<i>3 1/2 x 3 1/2</i>	<i>7</i>	<i>3 1/2 x 3 1/2</i>	<i>7</i>				
Single or double Angle Iron on Upper edge		<i>4 8</i>		<i>4 8</i>					
Average space		<i>4 8</i>		<i>4 8</i>					
BEAMS, Hold or Orlop		<i>19</i>	<i>13</i>	<i>19</i>	<i>13</i>				
Single or double Angle Iron, Plate on Tee Bulb Iron		<i>13</i>	<i>13</i>	<i>12 1/2</i>	<i>13</i>				
Single or double Angle Iron on Upper edge		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
Average space		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
KEELSONS Centre line, single or double plate, box or Intercoastal, Plates		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" Rider Plate		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" Bulb Plate to Intercoastal Keelson		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" Angle Irons		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" Double Angle Iron Side Keelson		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" Side Intercoastal Plate		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" Angle Iron		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" Attached to outside plating with angle iron		<i>3 1/2 x 3 1/2</i>	<i>8</i>	<i>3 1/2 x 3 1/2</i>	<i>8</i>				
BILGE Angle Irons		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" do. Bulb Iron		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
" do. Intercoastal plates riveted to plating for length		<i>6</i>	<i>4</i>	<i>6</i>	<i>4</i>				
BILGE STRINGER Angle Irons		<i>16</i>	<i>9</i>	<i>16</i>	<i>9</i>				
Intercoastal plates riveted to plating for length		<i>10 1/2</i>	<i>9</i>	<i>10 1/2</i>	<i>9</i>				
SIDE STRINGER Angle Irons		<i>16</i>	<i>9</i>	<i>16</i>	<i>9</i>				
Intercoastal plates riveted to plating for length		<i>16</i>	<i>9</i>	<i>16</i>	<i>9</i>				

The FRAMES extend in one length from *middle line* to *gunwale*  
The REVERSED ANGLE IRONS on floors and frames extend from *middle line* to *gunwale*  
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 *3 1/2* ins. from centre to centre.  
Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets *7/8* in. diameter averaging *5 1/2* ins. from centre to centre.  
Butts of *4* Strakes at Bilge for *half* length, treble riveted with Butt Straps *1 1/2* 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 1/2* ins. from cr. to cr.  
Butts from Bilge to Main Sheerstrake, worked carvel, double riveted; with rivets *7/8* in. diameter, averaging *3 1/2* 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 *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 *half* length.  
Breadth of laps of plating in double riveting *5 1/2 x 6* Breadth of laps of plating in single riveting  
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? *Double Treble* No. of Breasthooks, *3* Crutches, *3*  
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Best*  
Manufacturer's name or trade mark, *Cox & Bonfield, Stockton Malleable and Co. Ltd.*  
The above is a correct description. *Russell & Co.* Surveyor's Signature. *Russell & Co.*  
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?

Masts, Bowsprit, Yards, &c., are *Iron* 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 spars are in accordance with the approved plan, attached hereto. The iron has been tested as required and found good. "Consett" brand.*

NUMBER & LETTER for EQUIPMENT	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested and Superintendent, also Number of Certificate.	ANCHORS.	N <sup>o</sup> .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested and Superintendent, also Number of Certificate.
	Chain		270	2 1/2	107 1/2	270-2 1/2	6942-27 1/2/88	Bower Anchors	1	40.0.0	35.5.0.0	40.0.0	11079-31/7/88
	Fore Sails,	Iron Stream Chain	100	1 1/8	34 1/2	100-1 1/8	6943-24 1/2/88	(State Machine where Tested, &c., of Certificate, & Name of Superintendent.)	1	37.2.9	34.4.1.4	38.0.0	1719-7/3/88
	Fore Top Sails,	or Steel Wire	Tested at Sunderland by J. Hartness.										
	Fore Topmast Stay Sails,	or Hemp	70	1 1/2	40	90-1 1/2	Participated of	Stream Anchor	1	36.1.13	33.7.0.21	36.0.0	1720-4-
	Main Sails,	Towline, Hemp.	20	1 1/2	40	90-1 1/2	Steel wire from the	Kedge	1	12.0.21	14.1.3.14	12.0.0	1721-28/2/88
	Main Top Sails, and	or Steel Wire	40	1 1/2	40	90-1 1/2	Roanock Rope and Co.	2nd Kedge.	1	6.0.0	8.5.0.0	6.0.0	17030-27/2/88
		Warp	90	7	40	90-7	do.						
		quality	good	30	5" & others								

Standing and Running Rigging *ful. Steel wire* sufficient in size and *good* in quality. She has *2* Life Long Boat and *2* Others

The Windlass is *C. & J. McVie'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 Bunkers 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? *5 Ports, 4 Scuppers, and two*

*draining pipes on each side.*

Cargo Hatchways.—How formed? *Iron coverings, 24" high*

State size Main Hatch *15' 10" x 9' 11"* Forehatch *15' 8" x 10' 0"* Quarterhatch *7' 10" x 6' 0"*

If of extraordinary size, state how framed and secured?

*None do.*

What arrangement for shifting beams? *Shifting beam in both fore & main hatchways.*

Hatches, If strong and efficient? *Yes, Solid.*

Order for Special Survey No. *1350*

Date *7th Sept. 1887*

Order for Ordinary Survey No. *179*

Date *17th Sept. 1887*

No. *179* in builder's yard.

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 } 1887- Sept. 20, 23, 24, 27, 29; Oct. 3, 5, 6, 11, 14, 17, 18, 19, 21, 24, 26, 31;
- 2nd. On the plating during the process of riveting } Nov. 2, 7, 9, 14, 16, 21, 25, 28, 30; Dec. 5, 8, 12, 14, 16, 19, 21, 23, 28;
- 3rd. When the beams were in and fastened, and before the decks were laid... } 1888- Jan. 12, 17, 18, 20, 21, 23, 26; Feb. 1, 6, 10, 22; Mar. 5, 8, 9, 12, 13, 15, 19, 23, 24;
- 4th. When the ship was complete, and before the plating was finally coated or cemented... } Apr. 3, 23, 26; May 2, 7, 9, 15, 17, 21, 24, 26, 30, 31; June 1, 6, 9, 13, 15, 21, 26, 27, 28;
- 5th. After the ship was launched and equipped } July 3, 4, 16, 18, 20, 26, 30; August 4, 8, 13

State dates of letters respecting this case *1887- Oct 28, 20. Dec 24, 28. 1888 April 23. June 29.*

General Remarks (State quality of workmanship, &c.) *The workmanship is good, and the vessel has been constructed in accordance with the approved plans (2 in No.) also in general conformity with the rules. Two forging reports are also attached hereto. The collision bulkhead has been tested by hose & found good.*

*With reference to the Secretary's letter dated 28/12/87 (M), and to the Builder's letters herewith and to the sizes of the wire rigging in relation to the under deck tonnage, it is found on the completion of the vessel that the under deck tonnage is 2 tons over the 2000 tons. The sizes of the rigging, shown on the approved plan attached to Greenock Rept. No. 9570 on the "Madagascar", are the same in the sister vessels "Santa Hill" & "Madagascar", and I respectfully submit that under the circumstances the rigging in this instance be approved.*

*Forecastle 39' 0" including 4 ft. overhang, iron bulkhead & wing houses*

*Pop. 37' 0", deck extending 4 ft. beyond, iron bulkhead & wing houses.*

*Two wood deckhouses, iron frames & coverings 24' 6" x 16' 9" and 12' 9" x 10' 8"*

*The rigging is of crucible flexible steel wire supplied by the Greenock Rope and Co.*

State if one, two, or three decked vessel, or if open, or covering deck; and the lengths of poop, bridge, fore-castle, or raised quarter-deck. (If double bottom, state particulars on separate form.)

How are the surfaces preserved from oxidation? Inside *Waller's patent Cement & Paint* Outside *Paint.*

I am of opinion this Vessel should be Classed *100 A1. One deck, two tiers of beams.*

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

Special .....£ 76 : 13 : 6 *16/81 18 88*

(to be sent as per margin). Certificate ... *gratis.*

(Travelling Expenses, if any, £. Nil.)

Committee's Minute

Character assigned

*A & CP*

*100 A1*

*100 A1*

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

*The steel wire rigging was approved as on the sister vessel in which the under deck tonnage was under 2,000 tons. In the present ship the limit is exceeded by 2 tons. In view of the slight difference in the measurement of the tonnage it is submitted that the rigging as fitted be accepted, in which case the vessel will be eligible to be classed 100 A1 as recommended.*

*Lloyd's Register*

*Foundation*

*17/8/88*

Sketch of Midship Section forwarded 11/8/88. Certificate to be sent to