

IRON SHIP.

MONDAY 3 MAY 1886
(Received at London Office, 27th Feb 1885)

No. 9110 Survey held at Port Glasgow Date, First Survey 27th Feb 1885 Last Survey 24th Apr 1886
On the Steel Ship "Bothwell" (65 visits)

TONNAGE under Tonnage Deck	1946.07
Ditto of Third, Spar, or Awning Deck.	
Ditto of Poop, or Raised Or. Dk.	97.33
Ditto of Houses on Deck	21.83
of Forecastle	26.92
Tonnage	2092.15
Trow Space	53.22
Engine Room	
ter Tonnage out on Beam	2038.93

ONE, OR TWO DECKED, THREE DECKED VESSEL, SPAR, OR AWNING-DECKED VESSEL.	
Half Breadth (moulded)	20.5
Depth from upper part of Keel to top of Upper Deck Beams	27.0
Girth of Half Midship Frame (as per Rule)	41.7
1st Number	89.2
1st Number, if a 3 Decked Vessel deduct 7 feet	
Length	268.16
2nd Number	23919
Proportions— Breadths to Length	6.54
Depths to Length—Upper Deck to Keel	9.9
Main Deck ditto	

Master Harvey
 Built at Port Glasgow
 When built 1886 Launched 5th April, 1886
 By whom built Mrs Hamilton & Co
 Owners Mrs Hamilton & Co
 Residence Port Glasgow
 Port belonging to Port Glasgow
 Destined Voyage San Francisco
 If Surveyed while Building, Afloat, or in Dry Dock.

GTH deck as Rule	Feet. 268	Inches. 2	BREADTH— Moulded	Feet. 41	Inches. "	DEPTH top of Floors to Upper Deck Beams	Feet. 24	Inches. 10	Power of Engines	Horse. ✓	No. of Decks with flat laid	No. of Tiers of Beams
------------------	-----------	-----------	------------------	----------	-----------	---	----------	------------	------------------	----------	-----------------------------	-----------------------

Dimensions of Ship per Register, length, 283.55 breadth, 41.2 depth, 24.95

	Inches in Ship	Inches per Rule		Inches in Ship	Inches per Rule		Inches in Ship	Inches per Rule		Inches in Ship	Inches per Rule	
EL, depth and thickness	10 4 2 3/4	10 4 2 3/4	Flat Keel Plates, breadth and thickness			PLATES in Garboard Strakes, br'dth & thickness	36	28.18	36	20.18		
EM, moulding and thickness	10 4 2 3/4	10 4 2 3/4	From Garboard to upper part of Bilges			Of d'bling at Bilge, or increased thickness, and length applied	20 7/8	20.16	20 7/8	20.16		
ERN-POST for Rudder do. do.	10 4 2 3/4	10 4 2 3/4	From up. prt of Bilge to l. edge of Sh'rstrake			Main Sheerstrake, breadth and thickness	40	21.16	40	21.16		
" " for Propeller			Of d'bling at Sh'rstk. & lng. applied			From M'n. to Up. or Spar Dk. Sh'rstrake						
ance of Frames from moulding edge to moulding edge, all fore and aft	24	24	Up. or Spar Dk. Sh'rstrake, br'dth & thickn'ss.			Butt Straps to outside plating, breadth & thickness	16 1/2	16 1/2	23 1/2	16 1/2	23 1/2	
AMES, Angle Iron, for 2/3 length amidships	5 1/2	3 1/2	13	5 1/2	3 1/2	13	Lengths of Plating	6	Frames spaces			
do. for 1/2 at each end	5 1/2	3 1/2	12	5 1/2	3 1/2	12	Shifts of Plating, and Stringers	2+3	do	do		
VERSED FRAMES, Angle Iron	3 1/2	3 1/2	13	3 1/2	3 1/2	13	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	56	16	56	16	
DOORS, depth and thickness of Floor Plate at mid line for half length amidships	26	16	26	16	15	15	Angle Iron on ditto	6+4	15 1/2	6+4	15 1/2	
thickness at the ends of vessel							Tie Plates fore and aft, outside Hatchways	15	16	15	16	
depth at 2/3 the half-bdth. as per Rule	13	13	13	13	52	52	Diagonal Tie Plates on Beams No. of Pairs	6	15	16	15	16
height extended at the Bilges							Flat of Up., Spar, or Awning Dk.	4	4	4	4	
AMS, Upper, Spar, or Awning Deck	9 1/2	15	9 1/2	15			How fastened to Beams	Gal'd.	18	bolts & nuts		
ngle or d'ble Ang. Iron, Plate or Tee Bulb Iron	3 1/2	3 1/2	12	3 1/2	3 1/2	12	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness					
ngle or double Angle Iron on Upper edge							Is the Stringer Plate attached to the outside plating?					
Average space	48	48	48	48			Angle Irons on ditto, No.					
AMS, Main, or Middle Deck							Tie Plates, outside Hatchways					
ngle or d'ble Ang. Iron, Plate or Tee Bulb Iron							Diagonal Tie Plates on Beams, No. of pairs					
ngle or double Angle Iron, on Upper Edge							Flat of Middle Deck					
Average space							How fastened to Beams					
AMS, Lower Deck	10	16	10	16			Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	39	15	39	15	
ngle or d'ble Ang. Iron, Plate or Tee Bulb Iron	3 1/2	3 1/2	12	3 1/2	3 1/2	12	Orlop Beams	31	13	31	13	
ngle or double Angle Iron on Upper Edge							Is the Stringer Plate attached to the outside plating?					
Average space	48	48	48	48			Angle Irons on ditto, No.	4+4	15 1/2	4+4	15 1/2	
AMS, Hold, or Orlop							Stringer or Tie Plates, outside Hatchways	15	15.13	15	15.13	
ngle or d'ble Ang. Iron, Plate or Tee Bulb Iron							Flat of Lower Deck					
ngle or double Angle Iron on Upper Edge												
Average space												
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates	19	21.18	19	21.18			Ceiling betwixt Decks, thickness and material					
" Rider Plate		21	21	21			" in hold do. do.	Spanning				
" Bulb Plate to Intercoastal Keelson							Main piece of Rudder, diameter at head	8 1/2	8 1/2	8 1/2	8 1/2	
" Angle Irons	6	4	15.13	6	4	15.13	do. at heel	3 1/2	3 1/2	3 1/2	3 1/2	
" Double Angle Iron Side Keelson							Can the Rudder be unshipped afloat?					
" Side Intercoastal Plate							Bulkheads No. 1 No. per Rule					
" do. Angle Irons	3 1/2	3 1/2	12	3 1/2	3 1/2	12	" Thickness of	7/16 + 4/16 Iron				
LARGE Angle Irons	6	4	15.13	6	4	15.13	" Height up	to upper deck				
do. Bulb Iron							" How secured to sides of ship	Between double Frames				
do. Intercoastal plates riveted to plating for length							" Size of Vertical Angle Irons	5 1/2 3 1/2 1 1/2				
LARGE STRINGER Angle Irons 2 Bulbs	9	4	18	9	4	18	" Are the outside Plates doubled two spaces of Frames in length?	Yes				
Intercoastal plates riveted to plating for length	14 1/2	18	14 1/2	18			Sum as above applied to upper deck, Poop and Forecastle stringers					
Small all fore and aft attached to shell	3 1/2	3 1/2	13	3 1/2	3 1/2	13	Revised through plates with	7/8				
SMALL STRINGER Angle Irons							in Rivets, about	7				
do. Sum as above applied to middle line							alternately					
do. REVERSED ANGLE IRONS on floors and frames extend from middle line to upper deck stringer and to Forecastle							And butts properly shifted?	Yes				
do. KEELSONS. Are the various lengths of Plates and Angle Irons properly connected?												
do. PLATING. Garboard, double riveted to Keel, with rivets 1/8 in. diameter, averaging 5 7/8 ins. from centre to centre.												
do. 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.												
do. Butts from Keel to turn of Bilge, worked carvel, double riveted; with rivets 7/8 in. diameter averaging 3 1/2 ins. from centre to centre.												
do. Butts of 4 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 1/16 thicker than the plates they connect.												
do. 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.												
do. 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.												
do. Edges of Main Sheerstrake, double or single riveted. Upper Sheerstrake, double or single riveted.												
do. Butts of Main Sheerstrake, treble riveted for length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.												
do. Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.												
do. Breadth of laps of plating in double riveting 5 1/4 Breadth of laps of plating in single riveting												
do. Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? No. of Breasthooks, 6 Crutches, 5												
do. What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.?												
do. Manufacturer's name or trade mark, St. W. Hamilton & Co. North End Forge												
do. The above is a correct description.												
do. Builder's Signature, J. W. Hamilton & Co. Surveyor's Signature, W. J. Hamilton												
do. Surveyor to Lloyd's Register of British and Foreign Shipping												

State clearly where plating is of alternate thickness—as distinguished from distinguished thickness at ends of vessel.

* If Iron Deck, state if whole or part, and if wood deck is laid thereon.



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? *Only a very few*

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 *Constructed of Steel in accordance with the approved drawing attached, and the details of Rules have been complied with. 3 drawings attached.*

NUMBER & LETTER for EQUIPMENT	SAILS.	CABLES, &c.	Fathoms.	Inches.	Test per Certificate.		Inches per Rule.	Machine where Tested and Superintendent, also Number of Certificate.	ANCHOVS. N ^o .	Weight. Ex. Stock.	Test per Certificate	W'ght req'd per Rule.	Machine where Tested and Superintendent, also Number of Certificate.
					T	T							
	Chain	8 1/4	135	2 1/16	107 1/10	76 5/10	270	Lipton, E.A. Scott	Bower Anchor	9569	41:0:7	36:11:2:7	Lipton E.A. Scott
	Fore Sails,	8 1/2	135	2 1/16	do	do	2 1/16		Anchor	9595	38:2:21	34:19:1:14	
	Fore Top Sails,	8 1/2	100	1 1/8	3 1/4	18 + 22 3/4	1 1/16	Whitecross W & G		9578	34:1:14	31:18:0:14	Lipton E.A. Scott
	Fore Topmast Stay Sails,	9 1/4	90	4 1/2	steel wire	39	4		Total		114:0:14		
	Main Sails,	5 1/2	2@90	3	do	18	11"		Stream Anchor	9601	12:0:14	13:19:2:21	12.00
	Main Top Sails, and	90	90	11			7"		Kedge	9599	6:1:14	8:12:2:0	1.00
	quality	90	120	7 1/2			9"		2nd Kedge	9600	3:0:7	5:12:0:21	3.00

Standing and Running Rigging *Iron & Manila* sufficient in size and *good* in quality. She has *4* Long Boats and *2* Life Boats

The Windlass is *Patent* Capstan *good* and Rudder *good* Pumps *good & efficient*

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? *Ports and Drifters sufficient in size and number also Mooring Pipes*

Cargo Hatchways.—How formed? *Plate & angle in usual manner*

State size **Main Hatch** *20' x 12'* **Forehatch** *8' x 6'* **Quarterhatch** *8' x 6'*

If of extraordinary size, state how framed and secured? *Keel with plate beam main hatch & fore & aft to all*

What arrangement for shifting beams? *Plate fitted between struts angles, fastened with bolts & nuts*

Hatches, If strong and efficient? *Yes 3/2*

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. 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
261	6 th April 1885					1885: Feb. 27: Apr. 9. 13. 14. 17. 21. 23. 27.				
										May 1. 4. 11. 16. 22. 26: June 2. 4. 8. 12. 16. 17. 19. 23. 25.
										July 1. 14. 16. 17. 20. 21. 24. 29. 31: Aug. 10. 11. 13. 14. 17. 21. 24. 26.
										Sept. 7. 11. 14. 18. 29: Oct. 8. 12. 19. 28. 30: Nov. 5. 9. 12: Dec. 11. 17.
										1886: Feb. 4. 22. 26: Apr. 1. 3. 7. 9. 19. 22. 24 (65 visits)

State dates of letters respecting this case *February 26th March 12th 13th and 27th 1885*

General Remarks (State quality of workmanship, &c.) *The work is good and well finished throughout. This vessel has been built in accordance with the approved drawings hereto attached, the requirements & details of the Rules have been complied with, as well as the conditions of the Committee's Circular on Steel. 5 drawings relating to this case attached.*

State if one, two, or three decked vessel, or if spar, or running decked; 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 *Cement and Paint* Outside *Composition & Paint*

I am of opinion this Vessel should be Classed *100 A. 1*

The amount of the Entry Fee £ 5 : 0 : 0 is received by me, *J.W.*

Special £ 75 : 19 : 6 30th April 1886

(to be sent as per margin). Certificate ... *Greats* :-

(Travelling Expenses, if any, £ *nil*).

Committee's Minute

Character assigned

TUESDAY 4 MAY 1886

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

It is submitted that this vessel appears eligible to be classed

100 A. 1 Steel as recommended



Certificate to be sent to
 (The Surveyor are requested not to write on or below the space for Committee's Minute.)