

IRON SHIP.

MONDAY 3 MAY 1886

(Received at London Office,

No. 9110 Survey held at Port Glasgow Date, First Survey 27th Feb'y 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 2038.93
out on Beam

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 Harry
Built at Port Glasgow
When built 1886 Launched 5th April, 1886
By whom built Wm Hamilton & Co
Owners Wm 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 268 2 BREADTH— Moulded 41 DEPTH top of Floors to Upper Deck Beams 24 10 Power of Engines 1 Horse. No. of Decks with flat laid 1 No. of Tiers of Beams 2

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

EL, depth and thickness 10 4 2 3/4
M, moulding and thickness 10 4 2 3/4
ERN-POST for Rudder do. do. 10 4 2 3/4
for Propeller 24
ance of Frames from moulding edge to moulding edge, all fore and aft 24

AMES, Angle Iron, for 2/3 length amidships 5 1/2 3 1/2 13
do. for 1/2 at each end 5 1/2 3 1/2 12
VERSED FRAMES, Angle Iron 3 1/2 3 1/2 13
DOORS, depth and thickness of Floor Plate 26
t mid line for half length amidships 16
thickness at the ends of vessel 15
depth at 2/3 the half-bdth. as per Rule 13
height extended at the Bilges 52

AMS, Upper, Spar, or Awning Deck 9 1/2 15 9 1/2 15
gle or d'ble Ang. Iron, Plate or Tee Bulb Iron 3 1/2 3 1/2 12
gle or double Angle Iron on Upper edge 48
Average space 48

AMS, Main, or Middle Deck 10 16 10 16
gle or d'ble Ang. Iron, Plate or Tee Bulb Iron 3 1/2 3 1/2 12
gle or double Angle Iron, on Upper Edge 48
Average space 48

AMS, Lower Deck 10 16 10 16
gle or d'ble Ang. Iron, Plate or Tee Bulb Iron 3 1/2 3 1/2 12
gle or double Angle Iron on Upper Edge 48
Average space 48

AMS, Hold, or Orlop 10 16 10 16
gle or d'ble Ang. Iron, Plate or Tee Bulb Iron 3 1/2 3 1/2 12
gle or double Angle Iron on Upper Edge 48
Average space 48

ELSONS Centre line, single or double plate, 19 21.18 19 21.18
box, or Intercoastal, Plates 21
Rider Plate 21
Bulb Plate to Intercoastal Keelson 6 4 15.13 6 4 15.13

Angle Irons 6 4 15.13 6 4 15.13
Double Angle Iron Side Keelson 6 4 15.13 6 4 15.13
Side Intercoastal Plate 15.13
do. Angle Irons 3 1/2 3 1/2 12 3 1/2 3 1/2 12

Attached to outside plating with angle iron 3 1/2 3 1/2 12 3 1/2 3 1/2 12
LGE Angle Irons 6 4 15.13 6 4 15.13
do. Bulb Iron 6 4 15.13 6 4 15.13
do. Intercoastal plates riveted to plating for length 14 1/2 18 14 1/2 18

LGE STRINGER Angle Irons 9 4 18 9 4 18
Intercoastal plates riveted to plating for length 14 1/2 18 14 1/2 18
nearly all fore and aft 3 1/2 3 1/2 13 3 1/2 3 1/2 13

DE STRINGER Angle Irons 12 3 85
e FRAMES extend in one length from middle line to upper deck, Poop
e REVERSED ANGLE IRONS on floors and frames extend from middle line to upper deck, Poop

EELSONS. Are the various lengths of Plates and Angle Irons properly connected? 9/11 And butts properly shifted? 9/11

LATING. Garboard, double riveted to Keel, with rivets 1 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 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 1/2 ins. from centre to centre.

Butts of 4 Strakes at Bilge for 1/2 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 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 length amidships. Butts of Upper or Spar Sheerstrake, treble riveted length amidships.

Butts of Main Stringer Plate, treble riveted for 1/2 length amidships. Butts of Upper or Spar Stringer Plate, treble riveted for length.

Breadth of laps of plating in double riveting 5 1/4 Breadth of laps of plating in single riveting

Flat Keel Plates, breadth and thickness 36 26.18 36 26.18

PLATES in Garboard Strakes, br'dth & thickness 36 26.18 36 26.18

From Garboard to upper part of Bilges 18.15 18.15

Of d'bling at Bilge, or increased thickness, and length applied 3 strakes 20 1/2 20 1/2

From up. prt of Bilge to l. edge of Sh'rstrake 18.15 18.15

Main Sheerstrake, breadth and thickness 40 21.16 40 21.16

Of d'bling at Sh'rstrake & l. edge applied 40 21.16 40 21.16

From M'n. to Up. or Spar Dk. Sh'rstrake 16 1/2 16 1/2

Up. or Spar Dk. Sh'rstrake, br'dth & thickness 16 1/2 16 1/2

Butt Straps to outside plating, breadth & thickness 16 1/2 16 1/2

Lengths of Plating 6 Frames spaces 2 1/3 do 6

Shifts of Plating, and Stringers 2 1/3 do 6

Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness 56 16 56 16

Angle Iron on ditto 6 4 15 6 4 15

Tie Plates fore and aft, outside Hatchways 15 16 15 16

Diagonal Tie Plates on Beams No. of Pairs 6 15 16 15 16

Flat of Up., Spar, or Awning Dk. 4 4

How fastened to Beams 18 bolts & nuts

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. 2

Tie Plates, outside Hatchways 4 4 15 4 4 15

Diagonal Tie Plates on Beams, No. of pairs 15 15.13 15 15.13

Flat of Middle Deck do. do.

How fastened to Beams 39 15 39 15

Stringer Plates on ends of Lower Deck, Hold or Orlop Beams 31 13 31 13

Is the Stringer Plate attached to the outside plating? 9 11 9 11

Angle Irons on ditto, No. 2 4 4 15 4 4 15

Stringer or Tie Plates, outside Hatchways 15 15.13 15 15.13

Flat of Lower Deck do. do.

Ceiling betwixt Decks, thickness and material 1 1/2 2 1/2

" in hold do. do. 8 1/2 8 1/2

Main piece of Rudder, diameter at head 3 1/2 3 1/2

do. at heel 3 1/2 3 1/2

Can the Rudder be unshipped afloat?

Bulkheads No. 1 No. per Rule 1

" Thickness of 7 1/16 + 4 1/16 Iron

" Height up to upper deck

" How secured to sides of ship Between double frames

" Size of Vertical Angle Irons 5 1/2 3 1/2 and distance apart 30 ins.

" Are the outside Plates doubled two spaces of Frames in length? 9/11

Riveted through plates with 7/8 in. Rivets, about 7 apart.

alternately

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

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

Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? No. of Breasthooks, 6 Crutches, 5
What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? Steel
Manufacturer's name or trade mark, St. W. Hamilton & Co. Northwood Forge
The above is a correct description.
Builder's Signature, Wm Hamilton & Co. Surveyor's Signature, Wm Hamilton & Co.
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? *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 <u>25513</u>																	
SAILS.		CABLES, &c.		Fathoms.	Inches.	Test per Certificate.		Inches per Rule.	Machine where Tested and Superintendent, also Number of Certificate.	ANCHORS.		N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested and Superintendent, also Number of Certificate.	
N ^o .		Chain				T	T			Bower							
		(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)								Anchor							
<i>One</i>	Fore Sails,	8 1/2	135	2 1/4	107 1/10 & 76 5/10			<i>4 1/2</i>	<i>270</i>	<i>Tipton, E.A. Scott.</i>	<i>(State Machine where Tested, Date, or No. of Certificate, & Name of Superintendent.)</i>	<i>9569</i>	<i>41: 0: 7</i>	<i>36: 11: 2: 7</i>	<i>114 600</i>	<i>Tipton E.A. Scott.</i>	
<i>Two</i>	Fore Top Sails,	8 1/2	135	2 1/4	do & do			<i>2 1/2</i>				<i>9595</i>	<i>38: 2: 2</i>	<i>34: 19: 1: 14</i>			
<i>Three</i>	Fore Topmast Stay Sails,	8 1/2	100	1 1/8	34 1/8 & 22 3/4			<i>1 3/16</i>				<i>9578</i>	<i>34: 1: 14</i>	<i>31: 18: 0: 14</i>			
		Towline, Hemp	<i>90</i>		<i>4 1/2 steel wire</i>	<i>39</i>		<i>4</i>	<i>Whitecroft & Co.</i>			<i>Total</i>	<i>114: 0: 14</i>				
	Main Sails,	or Steel Wire	<i>8 1/2</i>	<i>2 @ 90</i>	<i>3</i>	<i>do</i>	<i>18</i>	<i>11"</i>	<i>do</i>	Stream							
		Hawser		<i>30</i>	<i>12</i>			<i>7"</i>		Anchor	<i>9601</i>	<i>12: 0: 14</i>	<i>13: 19: 2: 21</i>	<i>12 00</i>			
	Main Top Sails, and	Warp		<i>90</i>	<i>11</i>			<i>9"</i>		Kedge	<i>9599</i>	<i>6: 1: 14</i>	<i>8: 12: 2: 0</i>	<i>6 00</i>			
		quality	<i>good</i>	<i>90</i>	<i>7 1/2</i>					2nd Kedge	<i>9600</i>	<i>3: 0: 7</i>	<i>5: 12: 0: 21</i>	<i>2 00</i>			

Standing and Running Rigging *Stout & Manila* sufficient in size and *good* in quality. She has *4* Long Boats and *2* life 14 ft & 14 ft
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 Scuppers 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? *Strop with plate beams main hatch & fore & aft to all*

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

Hatches, If strong and efficient? *Yes 3 1/2*

Order for Special Survey No. <i>26</i>	1st. On the several parts of the frame, when in place, and before the plating was wrought	1885: Feb. 27: Apr. 9. 13. 14. 17. 21. 23. 27.
Date <i>6th April 1885</i>	2nd. On the plating during the process of riveting	May 1. 4. 11. 16. 22. 26: June 2. 4. 8. 12. 16. 17. 19. 23. 25.
Order for Ordinary Survey No. <i>27</i>	3rd. When the beams were in and fastened, and before the decks were laid...	July 1. 14. 16. 17. 20. 21. 24. 29. 31: Aug. 10. 11. 13. 14. 17. 21. 24. 26.
Date <i>1st May 1885</i>	4th. When the ship was complete, and before the plating was finally coated or cemented..	Sept. 7. 11. 14. 18. 29: Oct. 8. 12. 19. 28. 30: Nov. 5. 9. 13: Dec. 11. 17.
No. <i>10</i> in builder's yard.	5th. After the ship was launched and equipped	1886: Mch. 4. 22. 26: Apr. 1. 3. 7. 9. 19. 22. 24 (65 visits)

State dates of letters respecting this case *February 26 March 12 13 and 27 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 drawing's 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 open, or running 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 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, *Donkey Boiler Fee*

Special£ 75 : 19 : 6 30th Apr. 1886

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

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

Committee's Minute

Character assigned

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

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