

IRON SHIP.

No. *9246* Survey held at *Port Glasgow* Date, First Survey *25th June 1866* Last Survey *12th Feb 1867*
 On the *Iron M. "Thornhillbank"* (41 weeks) 1866

TONNAGE under Tonnage Deck } 1353.45 Ditto of Third, Spar, or Awning Deck. } Ditto of Poop, or Raised Or. Dk. } 81.85 Ditto of Houses on Deck } 16.04 Ditto of Forecastle } 40.17 Gross Tonnage } 1491.51 Less Crew Space } 86.69 Less Engine Room } Register Tonnage as cut on Beam } 1404.82	ONE, OR TWO DECKED, THREE-DECKED VESSEL, SPAN, OR AWNING-DECKED VESSEL. Half Breadth (moulded) ... 18' 6 1/2" Depth from upper part of Keel to top of Upper Deck Beams ... 23' 7" Girth of Half Midship Frame (as per Rule) ... 37' 6 1/2" 1st Number ... 7996 1st Number, if a 3-Decked Vessel deduct 7 feet ... Length ... 233' 2 1/2" 2nd Number ... 18650 Proportions - Breadths to Length ... 1/13 1/2 Depths to Length - Upper Deck to Keel ... 1/12 1/2 Main Deck ditto ...	Master <i>Grashin</i> Built at <i>Port Glasgow</i> When built <i>1866</i> Launched <i>27th Nov 1866</i> By whom built <i>Russell and Co</i> Owners <i>Andrew Weir & Co.</i> Residence <i>71 Waterloo St., Glasgow</i> Port belonging to <i>Glasgow</i> Destined Voyage <i>Melbourne</i> Surveyed while Building, Afloat, or in Dry Dock.
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LENGTH on deck as per Rule ... 233' 3" Dimensions of Ship per Register, length, 244.5 breadth, 37.6 depth, 21.8 1/2" KEEL , depth and thickness ... 9' 2 1/2" STEM , moulding and thickness ... 8' 1/2" STERN-POST for Rudder do. do. ... 8' 1/2" " for Propeller ... 24" Distance of Frames from moulding edge to moulding edge, all fore and aft ... 24" FRAMES , Angle Iron, for 1/2 length amidships ... 5' 3" 8" Do. for 1/2 at each end ... 5' 3" 8" REVERSED FRAMES , Angle Iron ... 3 1/2' 3" 8" FLOORS , depth and thickness of Floor Plate at mid line for half length amidships ... 24" 10" 24" 10" " thickness at the ends of vessel ... 12" 9" 12" 9" " depth at 3/4 the half-bdth. as per Rule ... 12" 9" 12" 9" " height extended at the Bilges ... 48" 48" BEAMS , Upper, Spar, or Awning Deck } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } Single or double Angle Iron on Upper edge ... 3 1/2' 3" 7" 3 1/2' 3" 7" Average space ... 48" 48" BEAMS , Main, or Middle Deck } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } Single or double Angle Iron on Upper edge ... 3 1/2' 3" 7" 3 1/2' 3" 7" Average space ... 48" 48" BEAMS , Hold, or Orlop } Single or d'ble Ang. Iron, Plate or Tee Bulb Iron } Single or double Angle Iron on Upper edge ... 3 1/2' 3" 7" 3 1/2' 3" 7" Average space ... 48" 48" KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates ... 17" 12" 17" 12" " Rider Plate ... 10 7/8" 12" 10 7/8" 12" " Bulb Plate to Intercoastal Keelson ... 5' 4" 9" 5' 4" 9" " Angle Irons ... 5' 4" 9" 5' 4" 9" " Double Angle Iron Side Keelson ... 5' 4" 9" 5' 4" 9" " Side Intercoastal Plate ... 8" 18" " do. Angle Irons ... 3' 3" 7" 3' 3" 7" " Attached to outside plating with angle iron ... 3' 3" 7" 3' 3" 7" BILGE Angle Irons ... 5' 4" 9" 5' 4" 9" " do. Bulb Iron ... 5' 4" 9" 5' 4" 9" " do. Intercoastal plates riveted to plating for length ... 5' 4" 9" 5' 4" 9" BILGE STRINGER Angle Irons ... 5' 4" 9" 5' 4" 9" Intercoastal plates riveted to plating for length ... 5' 4" 9" 5' 4" 9" SIDE STRINGER Angle Irons ... 5' 4" 9" 5' 4" 9"	DEPTH top of Floors to Upper Deck Beams ... 21' 8 1/2" Do. do. Main Deck Beams ... Flat Keel Plates, breadth and thickness ... PLATES in Garboard Strakes, br'dth & thickness ... 36" 11" 36" 11" " From Garboard to upper part of Bilges ... 10" 10" " Of d'bling at Bilge, or increased thickness, and length applied ... 46" 46" " From up. prt of Bilge to l.r. edge of Sh'rstrake ... 10" 10" " Main Sheerstrake, breadth and thickness ... 40" 12" 40" 12" " Of d'bling at Sh'rstrake & l.r. applied ... " From M.L. to Up. or Spar Dk. Sh'rstrake ... " Up. or Spar Dk. Sh'rstrake, br'dth & thickness ... Butt Straps to outside plating, breadth & thickness ... 5 1/2" 8" 5 1/2" 8" Lengths of Plating ... Shifts of Plating, and Stringers ... Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness ... 46" 10" 46" 10" Angle Iron on ditto ... 30" 8" 30" 8" Tie Plates fore and aft, outside Hatchways ... 5' 4" 9" 5' 4" 9" Diagonal Tie Plates on Beams No. of Pairs ... 13" 10" 13" 10" Flat of Up., Spar, or Awning Dk. ... 4" 4" How fastened to Beams ... Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness ... Is the Stringer Plate attached to the outside plating? Angle Iron on ditto, No. ... Tie Plates, outside Hatchways ... 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 Orlop Beams ... 33" 9" 33" 9" Is the Stringer Plate attached to the outside plating? Angle Irons on ditto, No. 2 ... 44" 9" 44" 9" Stringer or Tie Plates, outside Hatchways ... 13" 9" 13" 9" Flat of Lower Deck ... 3" 3" Ceiling betwixt Decks, thickness and material ... " in hold do. do. ... Main piece of Rudder, diameter at head ... 22" 22" do. at heel ... 6" 6" Can the Rudder be unshipped afloat? ... Bulkheads No. 1 No. per Rule ... " Thickness of 7/16 and 9/16 ... " Height up 15 ft 6 in ... " How secured to sides of ship between double frames ... " Size of Vertical Angle Irons 5 x 3 x 8 and distance apart 30 ins. ... " Are the outside Plates doubled two spaces of Frames in length? ...
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The **FRAMES** extend in one length from *Middle line* to *Foremast* Riveted through plates with 3/4 in. Rivets, about 6 apart.
 The **REVERSED ANGLE IRONS** on floors and frames extend from *Middle line* to *Main M.L. Stringer* and to *Forecastle* 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 1/8 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 3 1/2 ins. from centre to centre.
 " Butts of 4 Strakes at Bilge for 1/2 length, treble riveted with Butt Straps 3/16 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 1/8 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 1/2 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 ...
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? No. of Breasthooks, 5 Crutches, 4
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? *Frames, Beams & Angles only of James Watson & Co. Glasgow*
 Manufacturer's name or trade mark, *James Watson & Co. Glasgow*
 The above is a correct description.
 Builder's Signature, *Russell & Co.* Surveyor's Signature, *Wm. Russell* 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*

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 *Fore Mast 80' x 28" 3 plates in round 7/16 to 9/16*

Main Mast 82' x 28" 3 plates in the round 7/16 to 9/16 Makers of Iron

Mizzen Mast 82' x 28" 3 plates in the round 7/16 to 9/16 West Hartlepool & Sunderland

Bowsprit 44' x 24" (19' to top) 2 plates in the round 7/16 to 9/16. Riggers 3 x 3 x 1/2 which length

constructed in 2 accordance with suggested Tables

NUMBER for EQUIPMENT		1884	Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprnt.	ANCHORS.	N ^o .	Weight. Ex. Stock.	Test per Certificate.	W'ght req'd per Rule.	Machine where Tested & Suprnt.
SAILS.								Bower Anchors					
Chain			270	17/8	1882	17/8	23/11/86	1534 34.0 4.3112.2.0					
Fore Sails,								1535 32.1 17.308.0.14					
Fore Top Sails,			75	1	1882	1	23/11/86	1529 34.0 14.229.1.12					
Fore Topmast Stay Sails,			90	11		11		97-2-7					
Main Sails,								Stream Anchor 37 12.16 12.10.3.21 10 3/4 Glasgow					
Main Top Sails,			90	6		6		Kedge 1538 5.2 6.7.16.1.0 5 1/2 2.11/11/86					
and								2nd Kedge 1536 2.2.7 5.0.0.0 2 1/2 17/11/86					
Standing and Running Rigging								She has <i>four</i> Long Boat <i>and</i>					

The Windlass is *Simple Patent* Capstan *good* and Rudder *good* Pumps *good and 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? *Four trussers each side of Mts*

Cargo Hatchways. How formed? *Plate and angle iron*

State size Main Hatch *16' x 10' 6"* Fore hatch *8' x 6"* Quarter hatch *8' x 6"*

If of extraordinary size, state how framed and secured? *Shipping Mts to Main Hatch & Fore and Afters*

What arrangement for shifting beams? *Fitted between angles & secured with bolts & nuts*

Hatches. If strong and efficient? *solid 4"*

Order for Special Survey No. *2124* Date *17th June 1886*

Order for Ordinary Survey No. *2124* Date *17th June 1886*

No. *167* in builder's yard. State dates of letters respecting this case *June 24th 1886.*

General Remarks (State quality of workmanship, &c.) *The workmanship is good throughout*

This vessel has been built in accordance with the two

Photo prints attached, and in conformity with the Rules, the

details of which have been complied with. It will be observed

that the Steam Boiler is a few pounds light

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