

IRON SHIPS.

No. 6189 Survey held at Port Glasgow Date, First Survey 17th Nov 1871 Last Survey 28 June 1872

On the Iron Screw Steamer "Puerto Rico" Master Gyaguine

Tonnage under Tonnage Deck	143.57	ONE, OR TWO-DECKED, SPAR, OR AWNING-DECKED VESSELS.	THREE DECKED VESSELS.	Built at <u>Port Glasgow</u>
Ditto of Third Spar, or Awning Deck.		Half moulded breadth	Half Moulded Breadth	When built <u>1872</u> Launched <u>27 April 1872</u>
Ditto of Raig, or Raised Or. Dk.	57.30	Depth from upper part of Keel to top of Upper Deck Beams	Total Depth if three or more Decks	By whom built <u>Henry Murray & Co.</u>
Ditto of Houses on Deck	34.50	Girth of Half Midship Frame (as per Rule)	Total Girth of Half Midship Frame	Owners <u>John Turnbull & Co.</u>
Ditto of Forecastle	22.72	1st Number	3rd Number	Port belonging to <u>Santander</u>
Gross Tonnage	758.15	Length	Length	Destined Voyage <u> Clyde to Spain</u>
Crew Space, as per Rule		2nd Number	4th Number	If Surveyed while Building, Afloat, or in Dry Dock. <u>While building and afloat</u>
Register Tonnage, as per Rule		Depths to Length. <u>under 12</u>	Breadths to Length. <u>under 7</u>	

PLANS CASE

Length on deck as per Rule.	Feet. Inches.	Moulded Breadth.	Feet. Inches.	Depths from top of Floors to Upper and Main Deck Beams, as per Rule	Feet. Inches.	Effective Power of Engines.	Horse.	No. of Decks with flat laid	No. of Tiers of Beams
49.7		29.0		15.95		300		one	three
Dimensions of Ship per Register, length, <u>201</u> breadth, <u>29</u> depth, <u>15.8</u>						Estimated <u>90</u>			
Keel, bar iron, depth and thickness	8 x 2 3/8	8 x 2 3/8	8 x 2 3/8	8 x 2 3/8	Flat Keel Plates, breadth and thickness				
Do. if centre through plate, depth and thickness					Plates in Garboard Strakes, breadth and thickness				
Stem, if bar iron, moulding and thickness	7 x 2 3/8	7 x 2 3/8	7 x 2 3/8	7 x 2 3/8	Do. from Garboard to upper part of Bilges				
Stern-post for Rudder do. do.	8 1/2 x 4	8 1/2 x 4	8 1/2 x 4	8 1/2 x 4	Do. of doubling at Bilge, or increased thickness, and length applied <u>10 x 1/2 inches for 50 ft length amidships</u>				
Stern-post for Propeller	8 1/2 x 4	8 1/2 x 4	8 1/2 x 4	8 1/2 x 4	Do. from up part of Bilge to l. edge of Sh'rstrake				
Distance of Frames from moulding edge to moulding edge, all fore and aft	22	22	22	22	Do. Main Sheerstrake, breadth and thickness				
Frames, size of Angle Iron, for 1/2 length amidships	4	3	7/8	3 1/2	Do. of d'bling at Sh'rstrake, & length applied				
Do. for 1/4 at each end	4	3	7/8	3 1/2	Do. from Mn. to Upr. or Spar Dk. Sh'rstrake				
Reversed Frames, size of Angle Iron	3	3	7/8	3 1/2	Do. Up. or Spar Dk Sh'rstrake, brdth & thiekns				
Floors, depth and thickness of Floor Plate at mid line for half the length amidships	18 1/2	3/8	17 1/2	7/8	Butt Straps to outside plating, breadth & thickness				
Do. at the ends	18 1/2	3/8	17 1/2	7/8	Lengths of Plating				
Do. do. do. at Bilge Keelson	37	35	35	35	Shifts of Plating, and Stringers				
Do. height extended at the Bilges	37	35	35	35	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness				
Beams, Upper, Spar, or Awning Deck (No.) single or double Angle Iron, Plate or Tee Bulb Iron	7	7/8	7	7/8	Angle Iron on ditto				
Single or double Angle Iron on Upper edge	2 1/2	2 1/2	5/8	2 1/2	Tie Plates (fore and aft), outside Hatchways				
Average space	44 inches	44 inches	44 inches	44 inches	Diagonal Tie Plates on Beams (No. of Pairs,)				
Beams, Main or Middle Deck (No.) single or double Angle Iron, Plate or Tee Bulb Iron	7	7/8	7	7/8	Planksheer material and scantling				
Single or double Angle Iron on Upper Edge	2 1/2	2 1/2	5/8	2 1/2	Waterways do. do.				
Average space	44 inches	44 inches	44 inches	44 inches	Flat of Upper Deck do. do.				
Beams, Lower Deck, Hold or Orlop (No.) single or double Angle Iron, Plate or Tee Bulb Iron	7	7/8	7	7/8	How fastened to Beams				
Single or double Angle Iron on Upper Edge	2 1/2	2 1/2	5/8	2 1/2	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness				
Average space	88 inches	88 inches	88 inches	88 inches	(Is the Stringer Plate attached to the outside plating?) <u>Yes</u>				
Keelson Centre line, single or double plate, box, or Intercostal, size of Plates	13	10/8	13	10/8	Angle Irons on ditto (No.)				
Do. Bulb Plate to Intercostal Keelson	7 1/2	7/8	7 1/2	7/8	Tie Plates, outside Hatchways				
Do. Size of Angle Irons	5 1/2	7/8	4 1/2	3 1/2	Diagonal Tie Plates on Beams (No. of pairs, none)				
Do. Side Intercostal Keelson, size of Plates	11	7/8	11	7/8	Waterways materials and scantlings <u>Iron, gutted</u>				
Do. Angle Irons on tops of Floors	7	7/8	7	7/8	Flat of <u>Upper</u> Deck do. do. <u>Yellow Pine</u>				
Do. Bilge Keelson, Bulb Iron	7	7/8	7	7/8	How fastened to Beams <u>By screw bolts & rivets</u>				
Do. do. Intercostal plates riveted to plating for length	4 1/2	3 1/2	4 1/2	3 1/2	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams				
Do. do. Angle Irons	4 1/2	3 1/2	4 1/2	3 1/2	(Is the Stringer Plate attached to the outside plating?) <u>Yes</u>				
Side Stringers (No. of pairs) size of Angle Irons	4 1/2	3 1/2	4 1/2	3 1/2	Angle Irons on ditto (No. <u>Two</u>)				
Do. Intercostal plates riveted to plating for length	4 1/2	3 1/2	4 1/2	3 1/2	Stringer or Tie Plates, outside Hatchways				
Transoms, material <u>Iron</u> or, if none, in what manner compensated for.					Flat of Lower Deck				
Knight-heads <u>Iron</u> Hawse Timbers <u>Iron</u>					Ceiling betwixt Decks, thickness and material				
Windlass <u>Amstrong & Walker Patent</u> Fall Bitt <u>Iron</u>					Do. in hold <u>White Pine battens</u>				
The Frames extend in one length from <u>Keel</u> to <u>Gunwale</u> Riveted through plates with (<u>3/4</u> in.) Rivets, about <u>6</u> inches apart.					Main piece of Rudder, diameter at head				
The Reverse Angle Irons on the floors and frames extend <u>across</u> the middle line to <u>upper turn of bilges</u> and to <u>Gunwale</u> alternately					Do. do. at heel				
Keelsons. Are the various lengths of Plates and Angle Irons properly connected? <u>Yes</u> And are their butts properly shifted? <u>Yes</u>					(Can the Rudder be unshipped afloat? <u>Yes</u>)				
Plates, Garboard, double or <u>single</u> Riveted to Keel, double or <u>single</u> at upper edge, with Rivets (<u>1 1/4</u> in.) diameter, averaging (<u>5 x 3</u> ins.) from centre to centre.					Bulkheads No. <u>Five</u> Thickness of				
Do. Edges from Garboards to upper part of Bilge, worked Clencher, double or <u>single</u> Riveted; with Rivets (<u>3/4</u> in.) diameter, averaging (<u>3</u> ins.) from centre to centre.					Do. Height up <u>to main deck & on to cabin sole aft</u>				
Do. Butts from Keel <u>up</u> turn of Bilge, worked carvel with butt straps to strakes (<u>10 1/8</u>) thick, double or <u>single</u> Riveted; with Rivets (<u>3/4</u> in.) diameter averaging (<u>3</u> ins.) from centre to centre. Do the Butt Straps lay over and Rivet through the lands of the strakes above or below? <u>No</u>					Do. How secured to the sides of the ship <u>By cutaway double frames</u>				
Do. of <u>Iron</u> Strakes at Bilge for <u>1/2</u> length, treble riveted with Butt Straps <u>1/8</u> thicker than their plates.					Do. Size of Vertical Angle Irons <u>4 x 3 x 1/2</u> and their distance apart <u>30 inches</u>				
Do. Edges from bilge to Main Sheerstrake, worked <u>carvel with a lining piece</u> (<u>1 1/2</u>) thick, or clencher, double or <u>single</u> riveted; with rivets (<u>3/4</u> in.) diameter, averaging (<u>3</u> ins.) from centre to centre.					Do. Are the outside Plates doubled two spaces of Frames in length? <u>Yes</u>				
Do. Edges of Sheerstrake, Main, double or <u>single</u> Riveted. Upper, <u>double</u> or <u>single</u> Riveted. At upper edge <u>single</u> At lower edge <u>Double</u>									
Do. Butts from Bilge to Main Sheerstrake, worked Carvel with Butt Straps (<u>8 1/2</u>) thick, double or <u>single</u> Riveted; with Rivets (<u>3/4</u> in.) diameter, averaging (<u>3</u> ins.) from centre to centre.									
Do. Butts of Main Sheerstrake, double or <u>treble</u> Riveted. Butts of Upper or <u>Spar</u> Sheerstrake, and Upper Deck Stringer Plate, <u>double</u> or <u>treble</u> Riveted for <u>half</u> length amidships. Breadth of laps of plating in double Riveting (<u>4 1/2</u>) Breadth of laps of plating in single Riveting (<u>2 1/2</u>)									
Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? <u>Treble and double riveted</u>									
Planksheer, how secured to the plating of the sides. Waterway, how secured to the planksheer and to the Beams. (Explain by Sketch, if necessary.)									
Beams of the various Decks, how secured to the sides? <u>Beams ends turned down</u> No. of Breasthooks, <u>Four</u> Crutches, <u>Four</u>									
What description of Iron is used for the Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? <u>Plates Glasgow Iron Co.</u>									
Manufacturer's name or trade mark, <u>Coats & Co. Glasgow Iron Co.</u>									

We certify that the above is a correct description of the several particulars therein given.

Builder's Signature, Henry Murray & Co. Surveyor's Signature, H. B. S. S.

IRON 451-0333

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
 Do the fillings between the ribs and plates fill in solid with single pieces? Yes or are they in short lengths of various thicknesses? No
 Do the holes for riveting plate to frames, butt straps, or plate to plate, &c., conform well to each other? Yes and are the rivet holes well and sufficiently countersunk in the plate and punched from the faying surfaces? Yes
 Are there any rivets which either break into or have been put through the seams or butts of the plating? None

Her Masts, Bowsprit, Yards, &c., are in Good condition, and sufficient in size and length. If they are of Iron or Steel give the 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 64 feet long by 18 inches diameter - Pitch Pine
Main Mast 60 feet long by 17 inches diameter - Pitch Pine

10336

1871 Rules

N ^o .	Number for equipment	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS,		N ^o .	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
							20/12/71	22/2/71					
	SAILS. 13377	135	1 1/2	3 1/2 tons	1 1/2	3 1/2 tons	20/12/71	22/2/71	14.0.27	15.17.0.0	14.0.27	15 1/2 tons	
	CABLES, &c. 135	135	1 1/2	3 1/2 "	1 1/2	3 1/2 "	20/12/71	22/2/71	14.0.27	15.17.0.0	14.0.27	15 1/2 tons	
	Fore Sails, (State Machine where Tested, and name of Superintendent).												
	Fore Top Sails, Andrew Jack, Superintendent												
	Fore Topmast Stay Sails, Homper Stream	60	1 1/2	11 1/2 tons	1 1/2	11 1/2 tons	20/12/71	22/2/71	14.0.27	15.17.0.0	14.0.27	15 1/2 tons	
	Main Sails, Hawser	90	9		10		20/12/71	22/2/71	14.0.27	15.17.0.0	14.0.27	15 1/2 tons	
	Main Top Sails, Towlines	90	6		5		20/12/71	22/2/71	14.0.27	15.17.0.0	14.0.27	15 1/2 tons	
	Warp	90	6		5		20/12/71	22/2/71	14.0.27	15.17.0.0	14.0.27	15 1/2 tons	
	All of Good quality.	240	5		5		20/12/71	22/2/71	14.0.27	15.17.0.0	14.0.27	15 1/2 tons	

Her Standing and Running Rigging Good sufficient in size and Good in quality. She has Two Life Long Boats and Two others
 The present state of the Windlass is Good Capstan 2 Steam Winches and Rudder Common Good Pumps Four lead Good

Engine Room Skylights.—How constructed? Iron Casings How secured in ordinary weather? Tarpaulings

What arrangements are there for deadlights in such for bad weather? Wire frames

Coal Bunker Openings.—How constructed? Cast Iron plates & Lids How are lids secured? Hasps How high above deck? 2 inches

Scuppers, &c.—What arrangements are there beyond the scuppers on deck, for clearing upper deck of water, in case of a sea coming on board?
Ports in Bulwarks

Cargo Hatchways.—How formed? Iron Casings State size After Hatch 7 feet 6 inches by 7 feet

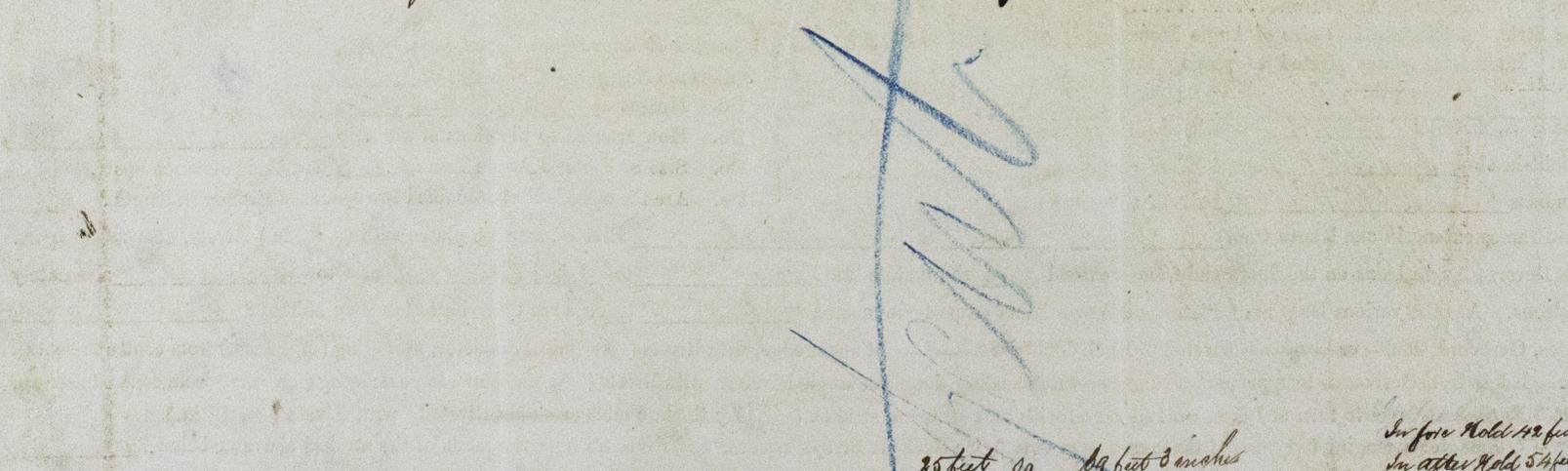
If of extraordinary size, state how framed and secured? As above

What arrangement for shifting beams? Shifting Beams of Iron secured with bolts & nuts. Two beams in fore & two in main hatches.

Hatches, themselves, whether strong and efficient? Strong & efficient **Main Hatchways.**—State size 22 feet by 11 feet fore & main hatches

Order for Special Survey No. 592 DATES of 1st. On the several parts of the frame, when in place, and before the plating was wrought
 Date 1st Nov 1871 Surveys held 2nd. On the plating during the progress of riveting
 Order for Ordinary Survey No. _____ while building 3rd. When the beams were in and fastened, and before the decks were laid
 Date _____ as per 4th. When the ship was complete, and before the plating was finally coated or cemented
 No. 48 in builder's yard. Section 18. 5th. After the ship was launched and equipped

General Remarks, This vessel has been built under Special Survey as per Order N^o 592. Is Schooner rigged and has a full fore-castle with a raised quarter deck, and house on deck for part of the crew & bridge. Is fitted with water ballast tanks, one in the after hold, and one in the fore hold connected to the bottom or outside plating with angle irons riveted up to and extending along in way of the frames which are cut off and supported by double bracket plates one above and the other below the side of the tank as shown on machinery sections herewith



State if one, two or three decked vessel, or if spar or awning decked, and lengths of poop, 25 feet fore-castle, 89 feet 3 inches raised quarter deck, or of double or part double bottom. In fore hold 142 feet in after hold 5 feet 6 inches

In what manner are the surfaces preserved from oxidation? Inside Portland Cement & upper part of bilges, above three coats of Iron paint Outside 2 coats of Red Lead & one coat of Red Lead & White lead paint, & Black paint on topsides

I am of opinion this Vessel should be Classed 100 A1.

The amount of the Entry Fee£ 5 : " : " is received by me,
 Special£ 37 : 18 : "
 X Certificate " : " : "

(Travelling Expenses) (if any) £ —

Committee's Minute 12th July 1872

Character assigned 100 A1

100 A1
part double bottom
 Lloyd's Register Foundation