

IRON SHIP.

No. **8004** Survey held at **Port Glasgow** Date, First Survey **27 July 1880** Last Survey **18 June 1881**
 On the **Crew Steamer "Laya"** Master **Pedro Lantup** 1881
 Tonnage under Tonnage Deck **1754.44** **ONE OR TWO DECKED, THREE DECKED VESSEL.** Built at **Port Glasgow**
 Ditto of Third, Spar, or Awning Deck. **316.89** **SPAR, OR AWNING DECKED VESSEL.** When built **1880-81** Launched **April 1880**
 Ditto of Poop, or Raised Qr. Dk. **73.08** By whom built **John Reid & Co**
 Ditto of Houses on Deck **2147.41** Owners **Compania Sud Americana de Vapores**
 Ditto of Forecastle **124.8** Port belonging to **Valparaiso**
 Gross Tonnage **2022.61** Destined Voyage **Upon to Valparaiso**
 Less Crew Space **687.17** If Surveyed while Building, Afloat, or in Dry Dock. **Whilst building & afloat**
 Register Tonnage as cut on Beam **1335.44**

LENGTH	Feet.	Inches.	BREADTH	Feet.	Inches.	DEPTH	Feet.	Inches.	Power of Engines	Horse.	Nº. of Decks with flat laid	Nº. of Tiers of Beams
on deck as per Rule	320	0	Moulded	39	10 3/4	top of Floors to Upper Deck Beams	20	11 1/2	280	280	Two	Two

Dimensions of Ship per Register, length, **332.4** breadth **40.05** depth, **20.25**

	Inches in Ship.	Inches per Rule.		Inches in Ship.	Inches per Rule.
KEEL, depth and thickness	10 x 2 3/4	10 x 2 3/4	FLAT KEEL PLATES, breadth and thickness	36	11
STEM, moulding and thickness	10 x 2 3/4	10 x 2 3/4	PLATES in Garboard Strakes, breadth and thickness	36	11
STERN-POST for Rudder do. do.	10 x 5 1/2	10 x 5 1/2	of doubling at Bilge, or increased thickness, and length applied	10 x 11	10 x 11
" for Propeller	10 x 5 1/2	10 x 5 1/2	fm up. part of Bilge to h. edge of Sh'rstrake.	41	15
Distance of Frames from moulding edge to moulding edge, all fore and aft	24	24	Main Sheerstrake, breadth and thickness of d'bling at Sh'rstrake, & length applied from Mn. to Up. or Spar Dk. Sh'rstrake.	16 ft at Hatchways	
FRAMES, Angle Iron, for 2/3 length amidships	5 3/8	5 3/8	Up. or Spar Dk Sh'rstrake, brdth & thickness	19 1/2 x 13 1/2	19 1/2 x 13 1/2
Do. for 1/3 at each end	5 3/8	5 3/8	Butt Straps to outside plating, breadth & thickness	16 x 14	16 x 14
REVERSED FRAMES, Angle Iron	3 1/2 x 3 8	3 1/2 x 3 8	Lengths of Plating	6 ft	6 ft
FLOORS, depth and thickness of Floor Plate at mid line for half length amidships	24	24	Shifts of Plating, and Stringers	5 ft	5 ft
thickness at the ends of vessel	12	12	Gunwale Plate on ends of Awning, Spar, or Upper Deck Beams, breadth and thickness	18 1/2	18 1/2
depth at 2/3 the half-bdth. as per Rule	12	12	Angle Iron on ditto	6 x 4 x 9	6 x 4 x 9
height extended at the Bilges	72	72	Tie Plates fore and aft, outside Hatchways	10	10
BEAMS, Upper, Spar, or Awning Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	5 3/8	5 3/8	Diagonal Tie Plates on Beams No. of Pairs	2	2
Single or double Angle Iron on Upper edge	48	48	Planksheer material and scantling	2 x 4	2 x 4
Average space	48	48	Waterways do. do.	2	2
BEAMS, Main, or Middle Deck Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	9 1/2	9 1/2	Flat of Upper Deck do. do.	2	2
Single or double Angle Iron, on Upper Edge	3 1/2 x 3 1/2	3 1/2 x 3 1/2	How fastened to Beams	46	46
Average space	48	48	Stringer Plate on ends of Main or Middle Deck Beams, breadth and thickness	46	46
BEAMS, Lower Deck, Hold, or Orlop Single or d'ble Ang. Iron, Plate or Tee Bulb Iron	9 1/2	9 1/2	Is the Stringer Plate attached to the outside plating?	Yes	
Single or double Angle Iron on Upper Edge	3 1/2 x 3 1/2	3 1/2 x 3 1/2	Angle Irons on ditto, No.	6 x 4 x 9	6 x 4 x 9
Average space	48	48	Tie Plates, outside Hatchways	16	16
KEELSONS Centre line, single or double plate, box, or Intercoastal, Plates on Flanks	19	19	Diagonal Tie Plates on Beams, No. of pairs	2	2
" Rider Plate	13	13	Waterways materials and scantlings	2 x 4	2 x 4
" Bulb Plate to Intercoastal Keelson	6	6	Flat of Lower Deck do. do.	5	5
" Angle Irons	6 4 9	6 4 9	How fastened to Beams	41	41
" Double Angle Iron Side Keelson	6 4 9	6 4 9	Stringer Plates on ends of Lower Deck, Hold or Orlop Beams	41	41
" Side Intercoastal Plate	6 4 9	6 4 9	Is the Stringer Plate attached to the outside plating?	Yes	
" do. Angle Irons	3 1/2 x 3 8	3 1/2 x 3 8	Angle Irons on ditto, No.	4 x 4 x 9	4 x 4 x 9
" Attached to outside plating with angle iron	6 4 9	6 4 9	Stringer or Tie Plates, outside Hatchways	16	16
BILGE Angle Irons	6 4 9	6 4 9	Flat of Lower Deck	5	5
" do. Bulb Iron	9 1/2	9 1/2	Ceiling betwixt Decks, thickness and material	2 1/2	2 1/2
" do. Intercoastal plates riveted to plating for length	6 4 9	6 4 9	" in hold do. do.	2 1/2	2 1/2
BILGE STRINGER Angle Irons	6 4 9	6 4 9	Main piece of Rudder, diameter at head	7 1/2	7 1/2
Intercoastal plates riveted to plating for half length	3 1/2 x 3 8	3 1/2 x 3 8	do. at heel	14	14
SIDE STRINGER Angle Irons	3 1/2 x 3 8	3 1/2 x 3 8	Can the Rudder be unshipped afloat?	Yes	

Transoms, material. Knight-heads. Hawse Timbers. **Iron**
 Windlass **Paul's patent** Pall Bitt
 The FRAMES extend in one length from **Before & aft Double bottom from keel to main Dk fore & aft to fore & aft**
 The REVERSED ANGLE IRONS on floors and frames extend **from middle line to side**
 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 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 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 three Strakes at Bilge for **half** 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 **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 length.
 " Breadth of laps of plating in double riveting **5 1/2** Breadth of laps of plating in single riveting
 Butt Straps of Keelsons, Stringer and Tie Plates, treble, double or single Riveted? **Double & double**
 Waterway, how secured to Beams **further** (Explain by Sketch, if necessary.)
 Beams of the various Decks, how secured to the sides? **Welded knees** No. of Breasthooks, **Five** Crutches, **Two**
 What description of Iron is used for Frames, Beams, Keelsons, Tie, and Stringer Plates, Outside Plating, &c.? **Good**
 Manufacturer's name or trade mark, **Frames, Revere's frames, Singer bottom plates, Stringers, Coatbridge, Shell plates, Blackow, Tynan & Co. Floors, Glasgow**
 The above is a correct description.
 Builder's Signature, **John Reid & Co** Surveyor's Signature, **David Reid**
 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 Wood* 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. *Yk. for an Iron works.*

State also Length and Diameter of Lower Masts and Bowsprit. *Formed of two plates in the round all edges double riveted & butts above main D. & double riveted*

	Length	Top	Heel	Head
Fore Mast	86.6	25 x 7	21 x 6	17 x 5
Main	88.3	25 x 7	21 x 6	17 x 5
Mizzen	69.6	20 x 6	17 x 6	13 x 4

Two angles in each mast the whole length. In fore, main 4 x 3 x 7 1/2 in tug in 3 1/2 x 3 x 7.

SAILS.		Fathoms.	Inches.	Test per Certificate.	Inches per Rule.	Machine where Tested & Suprntd.	ANCHORS.	No.	Weight. Ex. Stock.	Test per Certificate.	Weight req'd per Rule.	Machine where Tested & Suprntd.
N ^o .	CABLES, &c.											
Fore Sails,	Chain 2797	150	1 1/2	59.2-20	270... 1 1/2	Chater.	Bower Anchors	5902	32-2-6	30-1-0-0	32-0-0-0	
Fore Top Sails,	Iron St 3012	75 1/2	1 1/2	15-2-2-0	75... 1 1/2	A. J. Jack		6038	32-0-8	30-4-0-0	32-0-0-0	
Fore Topmast Stay Sails,	Ditto do.							6039	27-7-16	26-7-8-0	27-1-0-0	
Main Sails,	Hmpn Strm Cbl	90	12	90... 12			Stream	6040	11-0-0-0	12-7-2-0	10-2-0-0	
Main Top Sails,	Hawser ...	90	9 1/2	90... 9 1/2			Kedge	6041	5-2-2-3	8-0-0-0	5-1-0-0	
and others	Towlines ...	90	8	90... 7 1/2			Ditto	6042	2-2-3	5-1-0-0	2-2-0-0	
	Warp ...	90	7 1/2									
	quality	180	5									

Standing and Running Rigging *Mine Manila* sufficient in size and *good* in quality. She has *Two* Boats and 6 other

The Windlass is *Good* Capstan *Good* and Rudder *Good* Pumps *Good & sufficient.*

Engine Room Skylights. How constructed? *Coming place on main D. 30 x 8 1/2* How secured in ordinary weather? *Secured by 15 x 5 1/2*

What arrangements for deadlights in bad weather? *Brass rod guards & tarpaulins.*

Coal Bunker Openings. How constructed? *Circular glands* How are lids secured? *Checked & secured* Height above deck? *Flush.*

Scuppers, &c. What arrangements for clearing upper deck of water, in case of shipping a sea? *Five Scuppers & four ports on the main Deck, each side*

Cargo Hatchways. How formed? *Fore raft Carlings & Corning plates riveted to D.K. Gun.*

State size Main Hatch *12-0 x 7-0* Fore hatch *12-0 x 7-0* Quarter hatch *8-0 x 4-0*

If of extraordinary size, state how framed and secured?

What arrangement for shifting beams? *Strong fore & after in each hatchway.*

Hatches, If strong and efficient? *Wood framing & tarpaulins.*

Order for Special Survey No. 909	1st. On the several parts of the frame, when in place, and before the plating was wrought	Built under S.S. and surveyed 1880. July 24, 28, Aug 2, 5, 9, 10, 14, 20, 24, 26, 30, 31. Sept 1, 4, 15, 14, 22, 29. October 1, 6, 11, 19.
Date 27th July 1880	2nd. On the plating during the process of riveting	26, 28, November 3, 5, 10, 16, 23, 29. December 1, 10, 16, 20, 21.
Order for Ordinary Survey No. 1	3rd. When the beams were in and fastened, and before the decks were laid ...	1881 January 4, 11, 20, 22, 31. February 4, 8, 15, 18, 25, March 8, 16, 22.
Date	4th. When the ship was complete, and before the plating was finally coated or cemented...	April 5, 6, 11, 12, 26. May 6, 13, 18, June 1, 5, 18.
No. 6P in builder's yard.	5th. After the ship was launched and equipped	

General Remarks (State quality of workmanship, &c.) *Workmanship & materials good.*

This Vessel has been constructed in accordance with the accompanying approved sketches & in all other respects with the Rules.

The port double bottom extending from the Boiler B.T. to collar B.T. 166ft in length, has been tested with a head of water equal to the height of the deep load line & proved to be watertight.

In support of the Shade & the superstructure above it the Shade & Frames are spaced 4ft apart; and before & abaft the E & B Hatchway casing there are 5 tiers of Vertical and 7 pairs of diag^l pillars.

She is a well built Vessel and in my opinion eligible to be classed as stated below

"Shade" 33ft 166ft.
State if one, two, or three decked vessel, or if open, or running decked; and the lengths of poop, forecastle, *or raised quarter deck*, and the length of double bottom.

How are the surfaces preserved from oxidation? Inside *Cement & Red Lead Paint* Outside *Red & White lead & Racoet's Compound*

I am of opinion this Vessel should be Classed *90 A 1. Two Decks & Shade Deck. Valparaiso & Callao*

The amount of the Entry Fee ... £ 5 : 0 : 0 is received by me, *John D. Smith*

Special ... £ 45 : 11 : 0 21 June 1881

Certificate ... £ 0 : 0 : 0

(Travelling Expenses, if any, £ ...) £ 80 : 11 : 0

Committee's Minute *Friday, June, 24th 1881.*

Character assigned *90 A 1*

Shade & 2 Decks & Shade Deck