

REPORT ON MACHINERY.

Port of *Glasgow*

IUES, APL 22 1902

Received at London Office

No. in Survey held at *Penryn*Date, first Survey *21 June 1901*Last Survey *28 March 1902*

Reg. Book.

on the

*Compania Transatlantica S.S. No 16**"JOSE DE ARAMBURN"*Gross
Tons
Net

Master

Built at

By whom built

When built

Engines made at *Penryn*By whom made *Lobnitz & Co. Ltd*when made *1902*Boilers made at *Penryn*By whom made *Lobnitz & Co. Ltd*when made *1902*

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted

Is Electric Light fitted

ENGINES, &c.—Description of Engine *Triple expansion*No. of Cylinders *three* No. of Cranks *3*

Dia. of Cylinders *21" 34" 56"* Length of Stroke *36* Revs. per minute *as per rule 11.7* Dia. of Screw shaft *as fitted 12 1/2* Lgth. of stern bush *50"*
 Dia. of Tunnel shaft *as per rule 10* Dia. of Crank shaft journals *as per rule 10.5* Dia. of Crank pin *11 1/2"* Size of Crank webs *22 1/2" 8"* Dia. of thrust shaft under collars *11 1/2"* Dia. of screw *13 1/2"* Pitch of screw *14 1/2"* No. of blades *4* State whether moveable *solid* Total surface *75 sq ft*
 No. of Feed pumps *2* Diameter of ditto *4"* Stroke *9"* Can one be overhauled while the other is at work *yes*
 No. of Bilge pumps *2* Diameter of ditto *4"* Stroke *9"* Can one be overhauled while the other is at work *yes*
 No. of Donkey Engines *three* Sizes of Pumps *5 1/2" 4" 5" 4" 2 1/2" 5" 9" 7 1/2" 9"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room In Holds, &c.

No. of bilge injections *sizes* Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size
 Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
 Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line
 Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate
 What pipes are carried through the bunkers How are they protected
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight
 Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record *R*) Total Heating Surface of Boilers *3150 sq ft* Is forced draft fitted

No. and Description of Boilers *2 single ended return tube* Working Pressure *170 lbs* Tested by hydraulic pressure to *340 lbs*
 Date of test *6/3/02* Can each boiler be worked separately Area of fire grate in each boiler *54 sq ft* No. and Description of safety valves to each boiler *one pair direct spring* Area of each valve *7.07 sq in* Pressure to which they are adjusted *170 lbs* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *—* Mean dia. of boilers *14 1/2"* Length *10.3* Material of shell plates *steel*
 Thickness *1 1/2"* Range of tensile strength *27/32* Are they welded or flanged *no* Descrip. of riveting: cir. seams *double lap* long. seams *triple butt*
 Diameter of rivet holes in long. seams *1 1/2"* Pitch of rivets *8"* Lap of plates or width of butt straps *18"*
 Per centages of strength of longitudinal joint rivets *98.6* Working pressure of shell by rules *174 lbs* Size of manhole in shell *17 1/2" 13"*
 Size of compensating ring *9 1/2" 1 1/2"* Length *1 1/2"* No. and Description of Furnaces in each boiler *3 Morrison* Material *steel* Outside diameter *40"*
 Length of plain part *top 6" bottom 9"* Thickness of plates *top 1 1/2" bottom 2"* Description of longitudinal joint *welded* No. of strengthening rings *—*
 Working pressure of furnace by the rules *185* Combustion chamber plates: Material *steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *7/8"*
 Pitch of stays to ditto: Sides *8" 8"* Back *7 1/2" 8"* Top *7 1/2" 8"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *171*
 Material of stays *iron* Diameter at smallest part *1.99* Area supported by each stay *64 sq in* Working pressure by rules *232 lbs* End plates in steam space:
 Material *steel* Thickness *3/32* Pitch of stays *16 1/2" 16"* How are stays secured *27 nuts* Working pressure by rules *174* Material of stays *steel*
 Diameter at smallest part *4.75* Area supported by each stay *256 sq in* Working pressure by rules *186* Material of Front plates at bottom *steel*
 Thickness *1 1/2"* Material of Lower back plate *steel* Thickness *1 1/2"* Greatest pitch of stays *14 1/2" with 9/16" double* Working pressure of plate by rules *302 lbs*
 Diameter of tubes *3 1/2"* Pitch of tubes *4 3/4" 4 3/4"* Material of tube plates *steel* Thickness: Front *3/32"* Back *1/16"* Mean pitch of stays *9 1/2"*
 Pitch across wide water spaces *16" with 1/4" double* Working pressures by rules *292 & 185 lbs* Girders to Chamber tops: Material *iron* Depth and thickness of girder at centre *7" 3/16"* Length as per rule *25 1/2"* Distance apart *7 1/2"* Number and pitch of Stays in each *(2) 8"*
 Working pressure by rules *171 lbs* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler worked separately
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

DONKEY BOILER— No. Description Vertical
Made at Amman By whom made Cochran & Co When made 15/11/01 Where fixed
Working pressure 80 tested by hydraulic pressure to 160 No. of Certificate 6054 Fire grate area 20 1/4 Description of safety valves on pair spring
No. of safety valves two Area of each 7.07 Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can
enter the donkey boiler no Dia. of donkey boiler 6'-6" Length 14'-0" Material of shell plates steel Thickness 1/2" Range of tensile
strength 27-32 Descrip. of riveting long. seams lap double Dia. of rivet holes 3/4" Whether punched or drilled drilled Pitch of rivets 2 3/4"
Lap of plating 4'8" Per centage of strength of joint Rivets 69.1 Thickness of shell crown plates 7/16" Radius of do. 3'-3" No. of Stays to do. none
Dia. of stays. Dia. of furnace Top 2'-7 1/4" Bottom Length of furnace Thickness of furnace plates 19/32 Description of
joint partial Thickness of furnace crown plates 19/32 Stayed by Working pressure of shell by rules 107 lbs
Working pressure of furnace by rules 113 lbs Diameter of uptake 17 1/4" Thickness of uptake plates 9/16" Thickness of water tubes

SPARE GEAR. State the articles supplied:— 2 top end bolts & nuts, 2 bottom end bolts & nuts, 1 set
of coupling bolts, 2 main bearing bolts & nuts, 7rd and 8th pump valves
bolts & nuts assorted, Iron of various sizes, & in addition 1 span propeller
and shaft complete

The foregoing is a correct description,
FOR LOBNITZ & CO., LIMITED
Fred Solwitz Manufacturer.

Dates of Survey { During progress of work in shops - 1901. Jan. 21. Apr. 4. 9. Aug. 7. 14. 19. 29. Sep. 4. 13. 18. 30. Oct. 21. 22. 23. 24.
while building { During erection on board vessel - 30. Nov. 12. 14. 18. 22. Dec. 6. 10. 23. 1902. Jan. 4. 30. Feb. 11. 18. 20. Mar. 3. 6. 10. 14. 17. 28.
Total No. of visits 24.

Is the approved plan of main boiler forwarded herewith yes
" " " donkey " " no

General Remarks (State quality of workmanship, opinions as to class, &c.

L.M.C

Material of screw shaft Is the screw shaft fitted with a continuous liner the whole length of the stern tube no

Is the after end of the liner made water tight in the propeller boss If the liner is in more than one length are the joints burned
If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and
non-corrosive If two liners are fitted, is the shaft lapped or protected between the liners

To complete this survey the engine and boilers have to be fitted
on board the safety valves adjusted under steam and the
engine examined whilst at work.

This machinery so far as completed has been built under
special survey, the materials and workmanship are of good
description.

In my opinion this machinery will be eligible for the
above notification when this survey has been completed.

This machinery has now been shipped to Cadiz where it is to
be fitted on board

The amount of Entry Fee. £ : : When applied for,
Special £ 2.00 : : See entry on
Donkey Boiler Fee £ 2.00 : : attached report
Travelling Expenses (if any) £ : : When received, £ 14.3.03

A. McEand
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute Glasgow. 21 APR 1902

Assigned Deferred for completion

TUES. 16 DEC 1902



Lloyd's Register
Foundation