

REPORT ON MACHINERY.

No. 687

Port of Nantes

Received at London Office THU. JUL. 17. 1913

No. in Survey held at Nantes & St. Nazaire Date, first Survey 30th Apr. -12 Last Survey 19

Reg. Book.

(Number of Visits)

on the Single screw steamer SAINT LOUIS

Master Built at St. Nazaire By whom built Me. & Cham. de la Loire When built 1913

Engines made at Nantes By whom made ditto when made 1913

Boilers made at Nantes By whom made ditto when made 1913

Registered Horse Power ✓ Owners Cie Havale de l'Océanie Port belonging to Bordeaux

Nom. Horse Power as per Section 28 446 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c. Description of Engines Triple expansion, reciprocating No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 25.6 42.52 68.5 Length of Stroke 57.2 Revs. per minute 70 Dia. of Screw shaft as per rule 15.136 Material of screw shaft as fitted 15.157

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight

in the propeller boss Yes 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 Yes If two

liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 61 1/16"

Dia. of Tunnel shaft as per rule 13.15 Dia. of Crank shaft journals as per rule 13.81 Dia. of Crank pin 14.25 Size of Crank webs 54 5/16 x 9 7/16 Dia. of thrust shaft under

collars 13.86 Dia. of screw 228.35 Pitch of Screw 20 1/4 No. of Blades 4 State whether moveable Yes Total surface 108 sq ft

No. of Feed pumps 2 Diameter of ditto 3 3/32 Stroke 25 5/8 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 3/32 Stroke 25 5/8 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Galveston pump, Worthington dia 9 1/8 x 10 7/8 stroke No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 centre 7 4 wing (2 each side) each 3 1/2 In Holds, &c. in each of nos. 1-2-3 holds. 1-3 1/2 centre 2-2 3/4 wings

No. of Bilge Injections 1 sizes 7/8 Connected to condenser, or to circulating pump C. P. Is a separate Donkey Suction fitted in Engine room & size Yes, 3 5/16

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks 6 valves & 3 cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

What pipes are carried through the bunkers Bilge suction pipes How are they protected Efficiently with wood casings

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges. Yes

Dates of examination of completion of fitting of Sea Connections 3-5-13 of Stern Tube 9-5-13 Screw shaft and Propeller 15-5-13

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper deck

BOILERS, &c. (Letter for record (S)) Manufacturers of Steel Soc. An. de Toleries de Louvroil - Thyssen & Co.

Total Heating Surface of Boilers 5384 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 2 cylindrical Scotch boilers

Working Pressure 178 lb. Tested by hydraulic pressure to 320 Date of test 194-13 No. of Certificate 32

Can each boiler be worked separately Yes Area of fire grate in each boiler 63 sq ft No. and Description of Safety Valves to

each boiler 2 Lettmiller Pinel imp Area of each valve 5.94 sq in Pressure to which they are adjusted 183 lb. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers 15.6" Length 11.5 1/2" Material of shell plates Steel

Thickness 20.8 Range of tensile strength 28.4 to 29.9 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams double lap

long. seams double lap Diameter of rivet holes in long. seams 1.42" Pitch of rivets 9.24" Top of plates or width of butt straps 19 7/16"

Per centages of strength of longitudinal joint rivets 84.6 Working pressure of shell by rules 188 Size of manhole in shell 17 3/4 x 13 3/4

Size of compensating ring as approved No. and Description of Furnaces in each boiler 3 Morrison corrugated Material Steel Outside diameter 49 7/32

Length of plain part top 9.8 bottom 16 Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules 199 lb. Combustion chamber plates: Material Steel Thickness: Sides 9.4 Back 9.4 Top 9.4 Bottom 12.6

Pitch of stays to ditto: Sides 7 1/8 x 7.6 Back 8.5 x 7.1 Top 7 1/8 x 8.2 If stays are fitted with nuts or riveted heads Nuts in chamber Working pressure by rules 183

Material of stays Steel Diameter at smallest part 1.4" Area supported by each stay 65.2 Working pressure by rules 189 End plates in steam space:

Material Steel Thickness 16.4 Pitch of stays 15.75 How are stays secured double nuts Working pressure by rules 180 lb. Material of stays Steel

Diameter at smallest part 2 1/2 Area supported by each stay 260.5 Working pressure by rules 195 Material of Front plates at bottom Steel

Thickness 15.1 Material of Lower back plate Steel Thickness 16 Greatest pitch of stays 13.4 x 7.1 Working pressure of plate by rules 198 lb.

Diameter of tubes 2 1/2 Pitch of tubes 3.64 x 3.66 Material of tube plates Steel Thickness: Front 15.1 Back 12.6 Mean pitch of stays 8.21"

Pitch across wide water spaces 13" Working pressures by rules 329 + 215 lb. Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 1/16 x (2 x 12.6) Length as per rule 31 1/16 Distance apart 8.27 Number and pitch of stays in each 3 7/8"

Working pressure by rules 217 lb. Superheater or Steam chest; how connected to boiler 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 ✓

VERTICAL DONKEY BOILER—Manufacturers of Steel

No.	Description				
Made at	By whom made	When made	Where fixed		
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler	Dia. of donkey boiler	Length		
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—1 Propeller shaft, 1 crank shaft, 2 propeller blades, 1 air pump rod, 2 eccentric shafts. Remainder is in excess of Rule requirements.

The foregoing is a correct description,

Manufacturer.

LA DIRECTEUR
S/auing

1912
Dates of Survey while building
During progress of work in shops—Apr. 30—May 7—13—June 4—13—27—July 4—9—22—Aug 1—6—12—22—Sept 7—17—Oct 2—4—19—21—Nov 4—21—Dec 3—16—31—
During erection on board vessel—Jan. 2—9—20—29—Feb. 10—11—17—26—Mar. 5—12—19—22—31—Apr. 3—9—11—12—19—May 2—June 7
Total No. of visits

Is the approved plan of main boiler forwarded herewith Yes

Auxiliary
donkey

Dates of Examination of principal parts—Cylinders 4-6-12-19-3-13 Slides 30-4-12-19-3-13 Covers 4-7-12-19-3-13 Pistons 22-8-12-19-3-13 Rods 13-5-13
Connecting rods 19-3-13 Crank shaft 27-5-13 Thrust shaft 27-5-13 Tunnel shafts 22-5-13 Screw shaft 27-5-13 Propeller 27-5-13
Stern tube 7-5-13 Steam pipes tested 7-6-13 Engine and boiler seatings 22-5-13 Engines holding down bolts 16-6-13
Completion of pumping arrangements Boilers fixed 27-5-13 Engines tried under steam 2-7-13
Main boiler safety valves adjusted 2-7-13 Thickness of adjusting washers P.A. 20 1/2 F. 20.5 Stn. C. A. 18.5 F. 17.0
Material of Crank shaft Forged S.M. I. SAE Identification Mark on Do. W.K. Material of Thrust shaft Forged S.M. I. SAE Identification Mark on Do. No. 24 W.B.
Material of Tunnel shafts Do. Identification Marks on Do. W.K. Material of Screw shafts Do. Identification Marks on Do. 5108. P.A.
Material of Steam Pipes Drawn steel Test pressure 30 kilos. per centimetre²

General Remarks (State quality of workmanship, opinions as to class, &c.) The above engines & boilers have been built under Special Survey in accordance with the Rules & the plans submitted to & approved by the Committee. The workmanship is of the best description throughout & the material of the boilers, which is of open hearth steel was tested before delivery & fulfilled all requirements.

These engines & boilers are duplicates of those fitted to the "Saint Joseph" Nantes Rpt. No. 666.

The boiler safety valves were tested under steam, the accumulation never approached 10% of the working pressure.

The engines were tried under steam, ahead & astern, during several hours, running well & smoothly.

We are therefore of the opinion that the machinery is eligible for the record + LMC 7-13 in the Register Book.

It is submitted that
this vessel is eligible for 2 SB(FD) & 1 Aux S.B.
THE RECORD + LMC 7.13.

The amount of Entry Fee... £ 3 : 0 :
Special including... £ 42 : 6 :
Auxiliary Donkey Boiler Fee... £ : :
Travelling Expenses (if any) £ 9 : 0 :
When applied for... 19...
When received... 19...

Committee's Minute

FRI. JUL. 25. 1913

Assigned

+ hmc 7.13

MACHINERY CERTIFICATE

J.M. J.W.D.
G. Demarest & Co. 17/7/13
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.