

# REPORT ON MACHINERY.

No. 712

Received at London Office MON. MAY 14. 1914

When handed in at Local Office

Port of Nantes

Survey held at St. Nazaires

Date, First Survey 16-1-13 Last Survey

Survey on the *Ohio* Built at *Rouen* By whom built *Chartiers de l'Atlantique* when made *1914*

made at *St. Nazaire* By whom made *do* when made *1914*

made at *do* By whom made *do* when made *1914*

Owners *Chartiers de l'Atlantique* Port belonging to *do*

Horse Power *542* Is Refrigerating Machinery fitted for cargo purposes  Is Electric Light fitted

VES, &c. — Description of Engines *Triple expansion* No. of Cylinders *3* No. of Cranks *3*

Cylinders *690-1130-1900* Length of Stroke *1295* Revs. per minute *100* Dia. of Screw shaft *380* Material of screw shaft *F.I. Steel*

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

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

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *Yes* If two

are fitted, is the shaft lapped or protected between the liners  Length of stern bush *65"*

as per rule *355* Dia. of Crank shaft journals *373* as per rule *373* Dia. of Crank pin *380* Size of Crank webs *241.5* Dia. of thrust shaft under *600\**

s *373* Dia. of screw *373* Pitch of Screw *4.33"* No. of Blades *26.97"* State whether moveable *Yes* Total surface *Yes*

of Feed pumps *2* Diameter of ditto *110* Stroke *685* Can one be overhauled while the other is at work *Yes*

of Bilge pumps *2* Diameter of ditto *114* Stroke *685* Can one be overhauled while the other is at work *Yes*

of Donkey Engines *2* Sizes of Pumps *114* No. and size of Suctions connected to both Bilge and Donkey pumps *Yes*

Engine Room *In Holds, &c.*

of Bilge Injections *sizes* Connected to condenser, or to circulating pump *Is a separate Donkey Suction fitted in Engine room & size*

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*

all connections with the sea direct on the skin of the ship *Are they Valves or Cocks*

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*

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*

that pipes are carried through the bunkers *How are they protected*

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

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

dates of examination of completion of fitting of Sea Connections *of Stern Tube* *Screw shaft and Propeller*

the Screw Shaft Tunnel watertight *Is it fitted with a watertight door* *worked from*

MANUFACTURERS, &c. — (Letter for record (S.)) *Manufacturers of Steel* *Krupp-Henschel & Sohn* *Usines Metall. Basse Loire*

total Heating Surface of Boilers *900 m<sup>2</sup>* Is Forced Draft fitted *no* No. and Description of Boilers *4 single end circular*

Working Pressure *13.3 kilo* Tested by hydraulic pressure to *23.3 kilo* Date of test *14-11-13, 21-11-13* Nos of Certificate *37, 38, 39, 40*

can each boiler be worked separately *Area of fire grate in each boiler* *6.66 m<sup>2</sup>* No. and Description of Safety Valves to *Yes*

each boiler *Progressive escape* Area of each valve *65 m<sup>2</sup>* Pressure to which they are adjusted *Yes* Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *Mean dia. of boilers* *5m 008* Length *3m 600* Material of shell plates *Steel*

Thickness *29 m* Range of tensile strength *52-54 kilo* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *double*

long. seams *Keble* Diameter of rivet holes in long. seams *30 m* Pitch of rivets *89 m* Lap of plates or width of butt straps *444*

Per centages of strength of longitudinal joint *rivets* *121* Working pressure of shell by rules *13.4* Size of manhole in shell *400 x 300 m*

Size of compensating ring *900 x 800 m* No. and Description of Furnaces in each boiler *3 corrugated* Material *Steel* Outside diameter *1m 300*

Length of plain part *top* *bottom* Thickness of plates *15.5* Description of longitudinal joint *none* No. of strengthening rings *none*

Working pressure of furnace by the rules *13 kilo 4* Combustion chamber plates: Material *Steel* Thickness: Sides *14.5* Back *14.5* Top *14.5* Bottom *20 m*

Pitch of stays to ditto: Sides *180 m* Back *180* Top *180* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *15 kilo 75*

Material of stays *Steel* Diameter at smallest part *36* Area supported by each stay *32400* Working pressure by rules *14 kilo 7* End plates in steam space: *Steel*

Material *Steel* Thickness *25 m* Pitch of stays *365 x 350* How are stays secured *nuts in front* Working pressure by rules *19 kilo 4* Material of stays *Steel*

Diameter at smallest part *68* Area supported by each stay *127500* Working pressure by rules *20 kilo 8* Material of Front plates at bottom *Steel*

Thickness *23 m* Material of Lower back plate *Steel* Thickness *22* Greatest pitch of stays *180 x 180* Working pressure of plate by rules *36 kilo 2*

Diameter of tubes *68* Pitch of tubes *116 x 113* Material of tube plates *Steel* Thickness: Front *25* Back *21* Mean pitch of stays *332 x 326*

Pitch across wide water spaces *350 m* Working pressures by rules *13 kilo 7* Girders to Chamber tops: Material *Steel* Depth and *30/180 m*

thickness of girder at centre *2 x 161 x 31.5* Length as per rule *808* Distance apart *180* Number and pitch of stays in each *30/180 m*

Working pressure by rules *13 kilo 5* Superheater or Steam chest; how connected to boiler  Can the superheater be shut off and the boiler worked

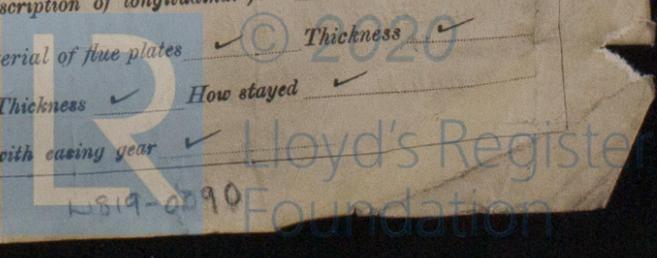
separately  Diameter  Length  Thickness of shell plates  Material  Description of longitudinal joint  Diam. of rivet

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

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 \_\_\_\_\_ Radius of do. \_\_\_\_\_ Stayed by \_\_\_\_\_

Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:—

LE DIRECTEUR  
DES CHANTIERS DE L'ATLANTIQUE

*Plan*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	During progress of work in shops ---	1913 Jan. 16 - Mar. 17 - Apr. 17-26 - May 15 - June 4-10-16 - July 22 - Aug. 1-19-25 - Sept. 5-9-18-23 - Oct. 3-10-16-21-27 - Nov. 3-14-21-28 - Dec. 10-19-27
	During erection on board vessel ---	Jan. 7-14-20-24-31 - Feb. 11-20-27 - Mar. 4-12-18-26-30 - (Apr. 3-10-15-24 - May 1-
	Total No. of visits	

Is the approved plan of main boiler forwarded herewith *yes.*

Dates of Examination of principal parts—Cylinders *19-8-13 etc* Slides *2-2-14 etc* Covers *10-4-14 etc*

Connecting rods *2-3-14 etc* Crank shaft *2-2-14 etc* Thrust shaft *27-2-14* Tunnel shafts \_\_\_\_\_

Stern tube \_\_\_\_\_ Steam pipes tested *1-5-14* Engine and boiler seatings \_\_\_\_\_

Completion of pumping arrangements \_\_\_\_\_ Boilers fixed \_\_\_\_\_ Engine \_\_\_\_\_

Main boiler safety valves adjusted \_\_\_\_\_ Thickness of adjusting washers \_\_\_\_\_

Material of Crank shaft *F. J. S. C.* Identification Mark on Do. *157-2-3* Material of Thrust shaft *F. J. S. C.*

Material of Tunnel shafts *F. J. S. C.* Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts *F. J. S. C.*

Material of Steam Pipes *Steel with rivetted flanges.* Test pressure *40*

**General Remarks** (State quality of workmanship, opinions as to class, &c. These eng. built under Special Survey in accordance with the Plans. The material & workmanship are satisfactory. Therefore, of the opinion, that the machinery is the notation **LMC** in the Register. All parts subject to pressure, including all cylinders, valves, condenser, feed heater, pump chambers, indicator cocks, expansion joints, air vessels, etc. all boiler mountings, including gauge columns, holders, scum, brine & blow down cocks; feed etc. have been hydraulic-tested to pressures of 2 to 28 kilos. per sq. in. This machinery is being fitted to Rouen to be fitted on board.

Certificate (if required) to be sent to Committee's Minute.

The amount of Entry Fee *£ 15.75* When applied for.

Special *£ 118.00* *2 Mar. 1914*

Donkey Boiler Fee *£ 325.00* When received.

Travelling Expenses (if any) \_\_\_\_\_

*C. Demarest &*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. MAR. 28 1914*

TUE JAN. 23. 1914

Assigned

