

REPORT ON MACHINERY.

No. 17216.

Received at London Office

WED. 5-DEC. 1917

Date of writing Report 29 Dec 1917 When handed in at Local Office 1st Dec 1917 Port of Greenock

No. in Survey held at Greenock Date, First Survey 3rd Nov 1916; Last Survey 26 Nov 1917
Reg. Book. Self 10-82/17 (Number of Visits 13. 25-5-18) Belfast 713

on the Steel Steamer Ville d'Arras Gross Tons 113 Net Tons 713

Master Built at London By whom built North of Ireland & Co When built 1917

Engines made at Greenock By whom made Wm & R. Kincaid & Co when made 1917

Boilers made at By whom made when made

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 462 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 25-41-68 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 14.25 Material of screw shaft Steel

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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 58

Dia. of Tunnel shaft as per rule 12.69 Dia. of Crank shaft journals as per rule 13.22 Dia. of Crank pin 15.5 Size of Crank webs 20.54 Dia. of thrust shaft under collars 15.5 Dia. of screw 17.6 Pitch of Screw 17.6 No. of Blades 4 State whether moveable Yes Total surface 96 sq ft

No. of Feed pumps Two Diameter of ditto 3 1/2 Stroke 27 Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps 15-10-5 & 8 No. and size of Suctions connected to both Bilge and Donkey pumps in Engine Room 4-3 1/2 In Holds, &c. 7-3 1/2 & 1-3

No. of Bilge Injections one size 7 1/2 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 7-3 1/2

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 Yes

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

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 Below

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 Fore hold sections How are they protected 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

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine Room Top platform

OILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 6972 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Three triple ended

Working Pressure 180 lbs Tested by hydraulic pressure to 560 lbs Date of test No. of Certificate

Can each boiler be worked separately Yes Area of fire grate in each boiler 53.57 sq ft No. and Description of Safety Valves to each boiler Two spring Area of each valve 8.29 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork Board 3 ft Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Steam dome: description of joint to shell % of strength of joint

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

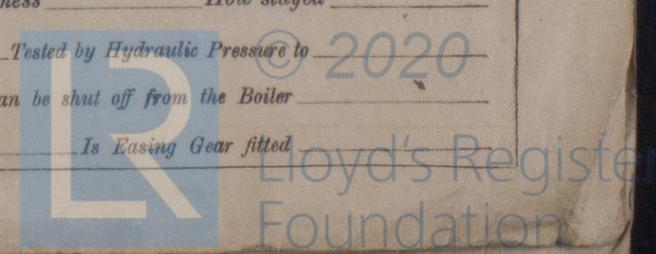
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to 2020

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

WS29-0275



IS A DONKEY BOILER FITTED? *Yes* If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied: - *2 top & two bottom end bolts units; 2 main bearing bolts; set coupling bolts; set feed & bilge pump valves; set air pump valves; 50 bolts units; box iron; 72 boiler tubes; 12 condenser tubes; escape valve spring, etc.*

The foregoing is a correct description,
FOR JOHN G. KINCAID & COY., LIMITED.

Robert Green Secretary *Manufacturer.*

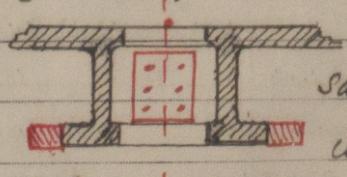
Dates of Survey while building: During progress of work in shops - (1916) Nov. 3, 14, 19, Dec. 1, 6, 8, 13, 26 (1917) Jan. 7, 16, 17, 19, 29, Feb. 5, 8, 13, 16, Mar. 2, 5, 9, 12, 15, 30, Apr. 2, 4, 6, 24, 26, 30, May 24, 31
During erection on board vessel - 4, 6, 11, 12, 14, 18, 21, 25, July, 2, 18, 20, 23, 26, 30, Aug. 3, 7, 10, 13, 14, 21, 23, 28, 29, 30, Sep. 3, 5, 18, 22, 26, 27, Oct. 1, 5, 8, 9, 11, 17, 22, 25, 27, Feb. 21, 22, 26
Total No. of visits *73* Is the approved plan of main boiler forwarded herewith *Yes*
" " " donkey " " " *No*

Dates of Examination of principal parts - Cylinders *4/10/17* Slides *5/10/17* Covers *4/10/17* Pistons *5/10/17* Rods *5/10/17*
Connecting rods *5/10/17* Crank shaft *8/10/17* Thrust shaft *18/6/17* Tunnel shafts *4/10/17* Screw shaft *18/9/17* Propeller *18/9/17*
Stern tube *18/9/17* Steam pipes tested *22-4-18* Engine and boiler seatings *13-2-18* Engines holding down bolts *22-4-18*
Completion of pumping arrangements *23-5-18* Boilers fixed *27-2-18* Engines tried under steam *28-5-18*
Completion of fitting sea connections *5-9-17* Stern tube *22-8-17* Screw shaft and propeller *22-8-17*
Main boiler safety valves adjusted *23-5-18* Thickness of adjusting washers *7-9-17*
Material of Crank shaft *Steel* Identification Mark on Do. *2451* Material of Thrust shaft *Steel* Identification Mark on Do. *247*
Material of Tunnel shafts *Steel* Identification Marks on Do. *219* Material of Screw shafts *Steel* Identification Marks on Do. *219*
Material of Steam Pipes *W. Iron & Copper* Test pressure *540 lbs sq. + 360 lbs*
Is an installation fitted for burning oil fuel *No* Is the flash point of the oil to be used over 150°F. *✓*
Have the requirements of Section 49 of the Rules been complied with *✓*
Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *P. Ville de Verdun*

General Remarks (State quality of workmanship, opinions as to class, &c.) *Workmanship good.*

The machinery of this vessel has been examined under special survey, and has now been shipped to Londonderry where it will be fitted on board the above named steamer.

Engines & boiler securely fitted on board. On preliminary trials at moorings, it was found that the H.P. & L.P. cylinder bottom stuffing boxes were cracked for about 7" height. The cylinder has been renewed (see Greenock Report attached), and the services of the vessel being again required, the L.P. cylinder was temporarily repaired by means of a plate patch over the crack and an iron ring 2 1/2" x 1 1/2" shrunk over the flange. Provided a new L.P. cylinder be fitted in three months time of August 1918. I am of opinion the vessel will be eligible for records + L.M.C. 5-18, with notation "Forced Draft" "Electric Light" & "Refrigerating Machinery".



R. F. Bennett

The amount of Entry Fee ... £ 5 : 0 : When applied for, *12-6-18*
Special ... £ 40 : 2 : When received, *14-12-1917*
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 13 : 12 : *13.12.6 pd 12 5 8*
Committee's Minute **GLASGOW** 4-DEC-1917
Assigned *Deferred for completion*

James Jones
Engineer Surveyor to Lloyd's Register of Shipping.
FRI. 4-APR 1919
TUE. 18 JUN. 1919
FRI. SEP. 27. 1919

FRI. 17 JUN. 1921 TUE. OCT. 19 1920 TUE. 10 MAR. 1920
FRI. MAY. 27 1921

Lloyd's Register Foundation

Certificate (if required) to be sent to the Registrar of Shipping, Glasgow. The Surveyors are requested not to write on or below the space for Committee's Minute.