Hull Report No. 33913

Rpt. 5a.

REPORT ON BOILERS.

No. 74,311

Received at London Office WED. APR. 27 1921

Date of writing Report 22. 4 1921 When handed in at Local Office 26 Apl 1921 Port of NEWCASTLE ON TYNE

No. in Reg. Book. Survey held at Hebburn Date, First Survey 29th Sept 1919 Last Survey 23rd April 1921 Number of Visits 46 Tons Gross 1111 22/32 Net

on the Main Boilers - 974 - 975 - S/S "SAINT DOMINIQUE" ~~Saint Dominique~~

Master Built at Hull By whom built Livingston & Cooper. (No. 193) When built 1921.

Engines made at By whom made When made

Boilers made at Hebburn By whom made Palmers S & I. Co Ld. 974 975 When made 1921 - 4

Registered Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~.—Manufacturers of Steel Spencer & Sons Ld

(Letter for record S) **Total Heating Surface of Boilers** 4104 Is forced draft fitted No **No. and Description of Boilers** two SE Cyl. multitubular **Working Pressure** 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 19.8.20

No. of Certificate 9448 Can each boiler be worked separately Yes **Area of fire grate in each boiler** 63 ft No. and Description of safety valves to each boiler 2 spring loaded Area of each valve 12.5 in Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers ~~or uptakes~~ and bunkers ~~or woodwork~~ 8'-6" Mean dia. of boilers Internal 14'-9 9/16" Length 10'-6"

Material of shell plates Steel Thickness 1 7/32" Range of tensile strength 28/32 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams DR Lap long. seams TRDBS Diameter of rivet holes in long. seams 1 9/32" Pitch of rivets 1 Rows 8 7/8 pitch 2 Rows 4 7/16

~~Thickness of plates or~~ width of butt straps 18 3/4" Per centages of strength of longitudinal joint rivets 89.25% plate 85.6% Working pressure of shell by rules 194 lbs Size of manhole in shell 16"x12" Size of compensating ring 14"x1 7/8"/1 7/32 **No. and Description of Furnaces in each boiler** 3. Morison Material Steel Outside diameter 45 3/4" Length of plain part top bottom Thickness of plates crown 9/16" bottom

Description of longitudinal joint Weld. No. of strengthening rings Working pressure of furnace by the rules 192 lbs Combustion chamber plates: Material Steel Thickness: Sides 21/32" Back 21/32 Top 21/32 Bottom 1" Pitch of stays to ditto: Sides 9"x8 1/2" Back 9x9 Top 8 1/2 x 8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183 lbs Material of stays Steel Area at smallest part 2.03 □" 2.36 □" Area supported by each stay 110 □" Working pressure by rules 192 lbs End plates in steam space: Material Steel Thickness 1 1/4"

Pitch of stays 20"x20" How are stays secured 8 Nuts 8 washers Working pressure by rules 185 lbs Material of stays Steel Area at smallest part 8.48 □" 81 □"

Area supported by each stay 400 □" Working pressure by rules 220 lbs Material of Front plates at bottom Steel Thickness 1 1/64 Material of Lower back plate Steel Thickness 15/16 Greatest pitch of stays 14 1/2 x 9" Working pressure of plate by rules 209 lbs Diameter of tubes 3 1/2"

Pitch of tubes 4 3/4 x 4 3/4 Material of tube plates Steel Thickness: Front 1 1/64" Back 25/32" Mean pitch of stays 9 1/2" Pitch across wide water spaces 14" Working pressures by rules 189 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2 x 17/8" Length as per rule 31 1/8" Distance apart 8" Number and pitch of Stays in each two of 8 1/2 pitch

Working pressure by rules 259 lbs Steam dome: description of joint to shell none % 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 none Date of Approval of Plan Tested by Hydraulic Pressure to

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

For Palmers Shipbuilding & Iron Co. Ltd. Hebburn Boiler Shop

The foregoing is a correct description,

A. Cameron. Manufacturer.

Duplicate Boilers 960-961/931-932.

Is the approved plan of boiler forwarded herewith Yes

Dates of Survey while building: During progress of work in shops - - / During erection on board vessel - - - (See other report)

Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These Boilers were built under Special Survey the material and workmanship found good and efficient. For notation see machinery report.

The Boilers were tested under 360 lbs hydraulic pressure (mountings) at the makers works and found Satisfactory. It is stated that these boilers have been despatched to Hull to be fitted on board s/s Saint Dominique

Survey Fee ... ... £ : : When applied for, ... 19.....

Travelling Expenses (if any) £ : : When received, ... 19.....

Leonard G. Shallcross

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. JUL. 18 1922 FRI. JUL. 13 1923

Assigned See other Nav. Rpt FRI DEC. 28 1923

TUES. 9 SEP 1924

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