Rept. 5a.

(Boiler No 2073).

REPORT ON BOILERS.

No. 81326

Date of writing Report 28. IX 1920. When handed in at Local Office 7 OCT 1920 19 Received at London Office SAT OCT 16 1920

No. in Reg. Book. Survey held at Birkenhead. Port of LIVERPOOL

on the Boiler No 2073 for J. Ardshean

Date, First Survey May 26th/20 Last Survey Sept 15th 1920 (Number of Visits 18.)

Master Built at By whom built Tons { Gross / Net

Engines made at Glasgow By whom made McKie & Baxter (No 939) When built

Boilers made at Birkenhead. By whom made Messrs Cammell Laird & Co Ltd. When made

Registered Horse Power Owners When made

Port belonging to

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

Letter for record S.) Total Heating Surface of Boilers 1809 ☐ft Is forced draft fitted No. and Description of Boilers One Cylindrical Multitubular S.B. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 15: IX. 20

No. of Certificate 2140 Can each boiler be worked separately Area of fire grate in each boiler 57.75 ☐ft No. and Description of Safety valves to each boiler Area of each valve Pressure to which they are adjusted

Are they fitted with easing gear 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 Inside dia. of boilers 14'-0" Length 10'-9"

Material of shell plates Steel Thickness 1 5/32" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No.

Descrip. of riveting: cir. seams DR. lap. long. seams T.R. Double Straps Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/2"; 4 1/4"

Pitch of plates or width of butt straps 18 1/8" Per centages of strength of longitudinal joint rivets 93.08. plate 85.29. Working pressure of shell by rules 184.4 lbs. Size of manhole in shell 16" x 12" Size of compensating ring McNeil No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 43 9/16" Length of plain part top 6-4 1/2" bottom 6'-10 7/8" Thickness of plates crown / bottom 25/32"

Description of longitudinal joint Welded No. of strengthening rings One. Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 21/32" Top 11/16" Bottom 1" Pitch of stays to ditto: Sides 10 1/2" x 8 5/8" / 8 3/4" Back 9 3/8" x 8 5/16" If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 180 lbs. Material of stays Steel Area at smallest part 1.73 ☐ft Area supported by each stay 77.4 ☐ft Working pressure by rules 180 lbs End plates in steam space: Material Steel Thickness 1 3/16" Pitch of stays 18 1/2" x 18 1/2" How are stays secured Nuts. Working pressure by rules 185 lbs Material of stays Steel Area at smallest part 5.94 ☐ft Area supported by each stay 342.25 ☐ft Working pressure by rules 180 lbs Material of Front plates at bottom Steel Thickness 31/32" Material of back plate Steel Thickness 13/16" Greatest pitch of stays 13 1/4" x 8 5/16" Working pressure of plate by rules 186 lbs Diameter of tubes 3 1/4" ext. Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 31/32" Back 27/32" Mean pitch of stays 13 1/2" x 9" Pitch across wide spaces 14 1/4" Working pressures by rules 189 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girders at centre 2 - 8 1/2" x 7/8" Length as per rule 34 1/2" Distance apart 8 3/4" & 8 1/2" Number and pitch of Stays in each 2 in No - 10 1/2" Working pressure by rules 186 lbs. 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

Test Tested by Hydraulic Pressure to

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

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

The foregoing is a correct description,

J. W. Laird

Manufacturer.

5 OCT 1920 CAMMELL LAIRD AND COMPANY LIMITED. LOCAL SECRETARY.

During progress of work in shops - - May 26. June 4.12.18.24. July 1.2.8.16.20.23. Aug 13.20.21.27. Sept 1.10.15.

During erection on board vessel - - -

Is the approved plan of boiler forwarded herewith

Total No. of visits 18.

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

This Boiler has now been built under Survey and in accordance with the approved plan & Secretary's letter (E) 9-II-20. The workmanship & materials are of good quality, and when tested to twice working pressure was found satisfactory in every respect.

Fee ... ... £ 6 : 0 :

Travelling Expenses (if any) £ : :

Surveyor Steading Carpenter.

When applied for, 19

When received, 6.12. 19 20 bb

Committee's Minute LIVERPOOL 8 OCT 1920

John Dykes & Digby H. Collinson

Engineer Surveyor to Lloyd's Register of Shipping.

Transmit to London Mr. || See Gen. Ref. 40524

TUE. NOV. 9 1920

Roll 9/10/20

W71-0026

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