

(Boiler No 2089)

Rpt. 5a.

REPORT ON BOILERS

No. 81972

SAT. 5 MAR. 1921

Received at London Office

Date of writing Report 2-2-1921 When handed in at Local Office 4 MAR 1921 Port of 191

No. in Survey held at Birkenhead Date, First Survey Sept 22nd/20 Last Survey Mar 1st 1921

Reg. Book. on the The Manchester Dry Dock (a Vessel) No 73. (Number of Visits 8) } Gross Tons }
 Net Tons }

Master John Spenser & Co. Ltd. Built at Ellesmere Port By whom built Manchester Dry Dock Co. Ltd. When built 1921

Engines made at Birkenhead By whom made Cammell Laird & Co. Ltd. When made 1921

Boilers made at Birkenhead By whom made Cammell Laird & Co. Ltd. When made 1921

Registered Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel John Spenser & Co. Ltd.

(Letter for record S) Total Heating Surface of Boilers 952 sq ft Is forced draft fitted No. and Description of Boilers One cylindrical multitubular S.B. Working Pressure 130 lbs. Tested by hydraulic pressure to 260 lbs. Date of test 23.12.20

No. of Certificate 2159 Can each boiler be worked separately Area of fire grate in each boiler 35 sq ft No. and Description of safety valves to each boiler One double spring loaded Area of each valve 4.9087 sq in Pressure to which they are adjusted 130 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 2'-0" Inside dia. of boilers 10'-6" Length 10'-0"

Material of shell plates Steel Thickness 3/32" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams DR. lap long. seams DR. double strap Diameter of rivet holes in long. seams 15/16" Pitch of rivets 4.88"

Lap of plates or width of butt straps 9 3/4" Per centages of strength of longitudinal joint Working pressure of shell by rules 134 lbs. Size of manhole in shell 16" x 12" Size of compensating ring McNeil No. and Description of Furnaces in each boiler 2 in No Plain Material Steel Outside diameter 3'-3 3/4" Length of plain part Thickness of plates

Description of longitudinal joint weld No. of strengthening rings Working pressure of furnace by the rules 130.5 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/32" Back 1/32" Top 1/32" Bottom 27/32" Pitch of stays to ditto: Sides 8 1/2" x 7 3/8" Back 8 1/2" x 7 3/8"

Top 8 1/2" x 7 3/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 137 lbs Material of stays Steel Area at smallest part 1.19 sq in Area supported by each stay 62.68 sq in Working pressure by rules 152 lbs End plates in steam space: Material Steel Thickness 3/32"

Pitch of stays 16" x 14 3/4" How are stays secured Nuts & Washers Working pressure by rules 142.5 Material of stays Steel Area at smallest part 3.26 sq in

Area supported by each stay 236 sq in Working pressure by rules 143.6 Material of Front plates at bottom Steel Thickness 3/32" Material of Lower back plate Steel Thickness 27/32" Greatest nitch of stays 14 3/4" x 7 3/8" Working pressure of plate by rules 181 lbs Diameter of tubes 5" ext.

Pitch of tubes 4 1/4" x 4 1/8" Material of tube plates Steel Thickness: Front 27/32" Back 1/16" Mean pitch of stays 10 5/8" Pitch across wide water spaces 14" Working pressures by rules 130 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6" x 1 7/16" Length as per rule 28 1/2" Distance apart 7 3/8" Number and pitch of Stays in each 2 in No - 8 1/2"

Working pressure by rules 137 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 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

The foregoing is a correct description,
CAMMELL LAIRD AND COMPANY LIMITED
Manufacturer
22 FEB 1921

Dates of Survey: During progress of Sept 22, Nov 12, 19, Dec 3, 10, 17, 22, Mar 1. Is the approved plan of boiler forwarded herewith

while building Total No. of visits 8

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

This boiler has now been built under Special Survey & in accordance with the approved plan & Secretary's letter (E) dated the 11th August 1920. The workmanship & materials are of good quality & when tested to twice the working pressure were found satisfactory in every respect.

Survey Fee £ 6 : 6 : : When applied for, 191

Travelling Expenses (if any) £ : : : When received, 191

Committee's Minute

Assigned Transmit to London

John Dykes & Dykes & Co. Ltd.
Engineer Surveyor to Lloyd's Register of Shipping.

003106-003115-0148