(Boiler No 2070)

REPORT ON BOILERS.

No. 81976

Received at London Office SAT. 5 MAR. 1921

Rpt. 1[illegible]

Report 4 - 3 - 1921. When handed in at Local Office 4 MAR 1921 Port of LIVERPOOL

Survey held at Birkenhead. Date, First Survey July 1st /1920 Last Survey Mar 1st 1921.

(Number of Visits 18.)

[O]n the St. "Shell Mex IV." Mess. J. J. Abdela & Mitchell's Vessel No 462. Tons Gross / Net

Port / No. in Reg. Book

Built at Queensferry. By whom built J. & J. Abdela & Mitchell Ld. When built

[Engines m]ade at By whom made When made

[B]oilers made at Birkenhead. By whom made Cammell Laird & Co Ld. When made 1921

[Regi]stered Horse Power Owners Port belonging to

[M]ULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

—Manufacturers of Steel John Spencer & Sons Ld. / The Earl of Dudley's Round Oak Wks.

[L]etter for record S) **Total Heating Surface of Boilers** 1135 ft² Is forced draft fitted **No. and Description of [B]oilers** One Cylindrical Multitubular S.B. **Working Pressure** 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 3-12-20

[No]. of Certificate 2157. Can each boiler be worked separately **Area of fire grate in each boiler** No. and Description of [saf]ety valves to each boiler 2 in No Spring loaded. Area of each valve 5·94 □" Pressure to which they are adjusted

[Ar]e they fitted with easing gear In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

[S]mallest distance between boilers or uptakes and bunkers or woodwork ~~Mean~~ Inside dia. of boilers 11'-6" Length 10'-0"

[M]aterial of shell plates Steel Thickness 3/4" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No.

[De]scrip. of riveting: cir. seams D.R. lap long. seams T.R. Double Straps Diameter of rivet holes in long. seams 7/8" Pitch of rivets 6"

[La]p of plates or width of butt straps 13 1/8" Per centages of strength of longitudinal joint rivets 98·78% plate 85·4% Working pressure of shell by [ru]les 136·1 lbs. Size of manhole in shell 16" x 12" Size of compensating ring 7 3/8" x 7/8" **No. and Description of Furnaces in each [B]oiler** 2 in No Morison's (withdrawable) Material Steel Outside diameter 44 1/4" Length of plain part top / bottom Corrugated Thickness of plates crown / bottom 7/16"

[D]escription of longitudinal joint Weld. No. of strengthening rings — Working pressure of furnace by the rules 142·2 lbs. Combustion chamber [pl]ates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 7/8" Pitch of stays to ditto: Sides 8 1/2" x 9" Back 9 1/4" x 8 1/4"

[T]op 8 1/2" x 8" If stays are fitted with nuts or riveted heads Nuts, rivetted outside shell. Working pressure by rules 142·3 lbs Material of stays Steel. Area at [s]mallest part 1·45 □" Area supported by each stay 76·5 □" Working pressure by rules 151·7 lbs End plates in steam space: Material Steel Thickness 27/32"

[P]itch of stays 16" x 16" How are stays secured Nuts & Washers Working pressure by rules 131·7 lbs Material of stays Steel Area at smallest part 3·26 □"

[A]rea supported by each stay 256 □" Working pressure by rules 132·4 lbs Material of Front plates at bottom Steel Thickness 7/8" Material of [L]ower back plate Steel Thickness 27/32" Greatest pitch of stays 14 1/2" x 8 1/4" Working pressure of plate by rules 154·5 lbs Diameter of tubes 3 1/2" ext.

[P]itch of tubes 4 5/8" x 4 5/8" Material of tube plates Steel Thickness: Front 7/8" Back 3/4" Mean pitch of stays 11 9/16" Pitch across wide [w]ater spaces 14 1/2" Working pressures by rules 180·4 lbs. Girders to Chamber tops: Material Steel Depth and thickness of [g]irder at centre 6" x 1 3/8" Length as per rule 27 3/16" Distance apart 8" Number and pitch of Stays in each 2 in No - 8 1/2"

Working pressure by rules 130·4 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 —

[SU]PERHEATER.

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.

J. W. Laird

Manufacturer.

Dates of Survey while building		
During progress of work in shops	July 1. Sept 22.24. Oct 1.8.14.22.25.29. Nov 5.10.12.19.24.26. Dec 3. Feb 21. Mar 1.	Is the approved plan of boiler forwarded herewith. Yes
During erection on board vessel		Total No. of visits 18.

LOCAL SECRETARY 22 FEB 1921

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 12th January 1920. The workmanship & materials are of good quality and when tested to twice the working pressure was found satisfactory in every respect.

Survey Fee ... ... £ 7 : 12 : When applied for, 4 MAR 1921 19

Travelling Expenses (if any) £ : : When received, 5 : 5 : 1921

John Dykes & Digby L. H. Collinson.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 4 MAR 1921

Assigned Transmit to London.

005403-005411-0021