

REPORT ON BOILERS.

No. 18226
WED. JUN. 4 1924

Received at London Office

Date of writing Report 10.4.1924 When handed in at Local Office 28.5.1924 Port of Greenock
 No. in Survey held at Greenock Date, First Survey 4th December 1922 Last Survey 22-5-1924
 Reg. Book. on the S/S ZAPALA (Number of Visits 13) Tons } Gross }
 Master Built at Glasgow By whom built Lithgow C^o L^{td} (754) When built 1924
 Engines made at Greenock By whom made Rankin & Blackmore C^o L^{td} (399) When made 1924
 Boilers made at ditto By whom made ditto (399) When made 1924
 Registered Horse Power Owners Burns & Southern Railway C^o Port belonging to London

MULTITUBULAR BOILERS ~~OR~~ OR DONKEY.—Manufacturers of Steel Dunlop & Lamont L^{td} S^c

(Letter for record S) Total Heating Surface of Boilers 1224 Is forced draft fitted No No. and Description of Boilers one Single Ended Working Pressure 100 Tested by hydraulic pressure to 200 Date of test 10.8.23

No. of Certificate 1635 Can each boiler be worked separately Area of fire grate in each boiler 35.12 No. and Description of safety valves to each boiler Double Spring Area of each valve 7.06 Pressure to which they are adjusted 105

Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 11-6" Length 10-0"

Material of shell plates S Thickness 19/32 Range of tensile strength 28-32 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams LSD long. seams DR + DBS Diameter of rivet holes in long. seams 13/16" Pitch of rivets 4-3/8"

Top of plates or width of butt straps 87/8" Per centages of strength of longitudinal joint rivets 92.4 plate 81.42 Working pressure of shell by rules 102 Size of manhole in shell 16 x 12" Size of compensating ring 29 1/2 x 25 1/2 x 19 3/2" No. and Description of Furnaces in each boiler 2 plain Material S Outside diameter 39 1/2" Length of plain part 74 1/8" Thickness of plates crown 19/32 bottom 19/32

Description of longitudinal joint DBS No. of strengthening rings 1 Working pressure of furnace by the rules 108 Combustion chamber plates: Material S Thickness: Sides 11/16" Back 23/32" Top 11/16" Bottom 11/16" Pitch of stays to ditto: Sides 12 1/4 x 12 1/4" Back 13 3/4 x 13 3/4"

Top 12 1/4 x 12 1/4" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 107 Material of stays S Area at smallest part 207 Area supported by each stay 49 Working pressure by rules 107 End plates in steam space: Material S Thickness 1/32"

Pitch of stays 13 x 21" How are stays secured DN Working pressure by rules 107 Material of stays S Area at smallest part 527

Area supported by each stay 483 Working pressure by rules 114 Material of Front plates at bottom S Thickness 11/16" Material of Lower back plate S Thickness 11/16" Greatest pitch of stays 13 3/8" Working pressure of plate by rules 106 Diameter of tubes 3 1/2"

Pitch of tubes 4 3/4 x 4 3/4" Material of tube plates S Thickness: Front 11/16" Back 45/64" Mean pitch of stays 14 1/2 x 9 1/2" Pitch across wide water spaces 13 1/2 x 9 1/6 DP Working pressures by rules 118 Girders to Chamber tops: Material S Depth and thickness of girder at centre 6 1/4 x 1 1/4" Length as per rule 28 5/8" Distance apart 12 1/4" Number and pitch of Stays in each 2 at 12 1/4"

Working pressure by rules 107 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 _____

UPERHEATER. 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,
RANKIN & BLACKMORE, LTD.,
Manufacturers.

Is the approved plan of boiler forwarded herewith Yes Director

Total No. of visits 13

Dates of Survey } During progress of }
while } work in shops - - }
building } During erection on }
board vessel - - - }
See Machinery Report.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey in accordance with the approved plan & the workmanship & material are of good quality, it is now securely fitted on board.

This Rept accompanied trial of Machinery

Survey Fee ... £ 4 : 4 : } When applied for, 26th May 1924
 Travelling Expenses (if any) £ : : } When received, 29th May 1924

Committee's Minute GLASGOW - 3 JUN 1924 W. Gordon-Mitchell
 Assigned See accompanying machinery report. Engineer Surveyor to Lloyd's Register of Shipping.

