

REPORT ON BOILERS.

No. 49073

Received at London Office 24 APR 1929

Date of writing Report 10-4-1929 When handed in at Local Office 16-4-1929 Port of Glasgow

No. in Reg. Book. Survey held at Glasgow Date, First Survey 20-2-29 Last Survey 16-4-1929

on the (Number of Visits 7) Tons } Gross
Net

Master Built at By whom built Yard No. When built

Engines made at By whom made Engine No. When made

Boilers made at Carfin By whom made Anderson Sons Ltd Boiler No. 3044 When made 1929

Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel D. Colville Sons (Letter for Record 5)

Total Heating Surface of Boilers 4600 sq ft Is forced draught fitted ✓ Coal or Oil fired ✓

No. and Description of Boilers 1 - loco-Marine Working Pressure 150. lb

Tested by hydraulic pressure to 245 lb Date of test 8-4-29 No. of Certificate 18247 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 18.3 sq ft No. and Description of safety valves to each boiler ✓

Area of each set of valves per boiler { per Rule ✓ as fitted ✓ 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 ✓ Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated

Largest internal dia. of boilers Barrel 4-5 3/16 Length 11'-0" Barrel Shell plates: Material Steel Tensile strength 28-32

Thickness 13/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end S.R. inter 2" 2.8"

long. seams D.R.-D.B.S. Diameter of rivet holes in { circ. seams 13/16" long. seams 16" Pitch of rivets { 2" 2.8"

Percentage of strength of circ. end seams { plate 59.3% rivets 53.3% Percentage of strength of circ. intermediate seam { plate 71% rivets 142%

Percentage of strength of longitudinal joint { plate 142% rivets combined Working pressure of shell by Rules Barrel 150. lb

Thickness of butt straps { outer 3/8" inner 1/2" No. and Description of Furnaces in each Boiler one rectangular

Material Steel Tensile strength 26-30 Smallest outside diameter

Length of plain part { top 4'-5 13/16" bottom Thickness of plates { crown 1/2" bottom 1/2" Description of longitudinal joint ✓

Dimensions of stiffening rings on furnace or c.c. bottom 3" x 2 1/2" Working pressure of furnace by Rules ✓

End plates in steam space: Material Steel Tensile strength 26-30 Smokebox tube plate 17/32" Long 13" Thick 5/8" Pitch of stays 17 1/2" Gross 14 1/4"

How are stays secured D.V. & Riveted doublers Working pressure by Rules 172. lb

Tube plates: Material { front Steel back Tensile strength 26-30 Thickness 5/8"

Mean pitch of stay tubes in nests 9 9/32" Pitch across wide water spaces ✓ Working pressure { front 159 lb back

Girders to combustion chamber tops: Material Steel Tensile strength 26-30 Depth and thickness of girder

at centre 9thds per inch Length as per Rule Pitch 6 1/2" x 7 1/2" Distance apart No. and pitch of stays

in each Working pressure by Rules 163 lb Combustion chamber plates: Material Steel

Tensile strength 26-30 Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom

Pitch of stays to ditto: Sides 7 1/2" x 6 1/2" Back 7 x 7 1/4" Top 7 1/2" x 6 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 171 lb Front plate at bottom: Material Steel Tensile strength 26-30

Thickness 17/32" Lower back plate: Material Steel Tensile strength 26-30 Thickness 5/8"

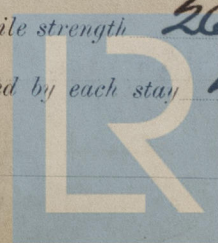
Pitch of stays at wide water space ✓ Are stays fitted with nuts or riveted over ✓

Working Pressure Main stays: Material Steel Tensile strength 28-32

Diameter { At body of stay, or Over threads 1 7/8" No. of threads per inch 6 Area supported by each stay 117 sq in

Working pressure by Rules 191 lb - 153 lb Screw stays: Material Steel Tensile strength 26-30

Diameter { At turned off part, or Over threads 1 1/4" No. of threads per inch 9 Area supported by each stay 48.7 sq in



Working pressure by Rules **163 lb** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part, **1 1/2"** or Over threads **176 lb**

No. of threads per inch **9** Area supported by each stay **71.25 sq** Working pressure by Rules **175 lb**

Tubes: Material **Iron** External diameter { Plain **2 1/2"** Thickness **5/16"** No. of threads per inch **9**

Pitch of tubes **3 3/8" x 3 3/8"** Working pressure by Rules **175 lb** Manhole compensation: Size of opening in shell plate **15" x 11"** Section of compensating ring **5" x 5/8"** No. of rivets and diameter of rivet holes **40 - 13/16"**

Outer row rivet pitch at ends **3 1/8"** Depth of flange if manhole flanged **-** Steam Dome: Material

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays

How connected to shell Inner radius of crown Working pressure by Rules

Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of { Tubes Steel castings

Number of elements Material of tubes Internal diameter and thickness of tubes

Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per Rules

Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes, castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,
ALEX. ANDERSON & SONS LTD. Manufacturer.

Dates of Survey { During progress of work in shops - - **29 Feb 20 Mar 25 29 Apr 2 8 16** Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **yes.**

while building { During erection on board vessel - - -

Total No. of visits **7**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been built under special survey, to approved plans and the Society's Rules. Materials and workmanship are good. It is to the order of Wm McKie & Baxter, for their Eng No 1243 - 16 be shipped to Singapore.**

Survey Fee ... £ **4 : 4 : 0** When applied for, **12 APR 1929**

Travelling Expenses (if any) £ **✓** When received, **15 5 1929**

H. L. Sutherland.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 23 APR 1929**

Assigned **TRANSMIT TO LONDON**

TUE. 18 MAR 1930
See Eng. No **405320**

