

REPORT ON BOILERS.

49244
No. 49244A

Received at London Office 19 JUN 1929

Date of writing Report 16-6-29 1929 When handed in at Local Office 17-6-29 1929 Port of Glasgow

No. in Surveys held at Reg. Book. 104 Date, First Survey 18-1-29 Last Survey 17-6-29 1929

on the Carfin (Number of Visits 13) Gross Tons 117 Net Tons 117

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. 3046/7 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 S)

Total Heating Surface of Boilers 920 sq. ft. (2 BLRS) Is forced draught fitted _____ Coal or Oil fired _____

No. and Description of Boilers 2 LOCO-MARINE Working Pressure 150 lbs

Tested by hydraulic pressure to 275 lbs Date of test 17-5-29 No. of Certificate 18301 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 S.R.

Thickness 13/32" Are the shell plates welded or flanged no Description of riveting: circ. seams { end _____ inner _____

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

Percentage of strength of circ. end seams { plate _____ rivets 59.3 Percentage of strength of circ. intermediate seam { plate _____ rivets 53.3

Percentage of strength of longitudinal joint { plate _____ rivets 71 Working pressure of shell by Rules Barrel 150 lbs

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

Dimensions of stiffening rings on furnace or on bottom 3" x 2 1/2" Working pressure of furnace by Rules 171 lbs

End plates in steam space: Material Steel Tensile strength 26-30 Thickness 12/32" Pitch of stays Gross 14 1/4"

How are stays secured DIV + Riveted doublers Working pressure by Rules 172 lbs

Tube plates: Material { front Steel back _____ Tensile strength { _____ Thickness { 5/8"

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

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

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

in each _____ Working pressure by Rules 171 lbs 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 1/2" Top 7 1/2" x 6 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 171 lbs 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 Longit 1 7/8" Cross 2" No. of threads per inch 6 Area supported by each stay 117 sq. in.

Working pressure by Rules 191-153 lbs 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 48.75 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"**
 No. of threads per inch **9** Area supported by each stay **71.25 sq** Working pressure by Rules **176 lb**
 Tubes: Material **Iron** External diameter ^{Plain} **2 1/2"** Thickness ^{10 w.f.} **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
 Barrel 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 _____ Inner radius of crown _____ Working pressure by Rules _____
 How connected to shell _____ 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} _____
 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. FRASER & SON, LTD.
 J. W. L. Flannery Manufacturer.

Dates of Survey ^{During progress of work in shops - -} **1929 Jan 18 Feb 20 Mar 1 25 Apr** Are the approved plans of boiler and superheater forwarded herewith **no - see**
 while building ^{During erection on board vessel - -} **16 19 24 May 6 8 14 17 June 4 17** Total No. of visits **maker 3044/5 13** **2/6 RPL No 49073/4**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 These boilers have been built under Special Survey, to approved plans, in accordance with the Society's Rules. Materials and workmanship are good. They are to the order of Mr Mc Kie Baxter of Glasgow, for their Engine No 1244.

a.g.
 13/6/29.

Survey Fee ... £ **8.80** When applied for, **18 JUN 1929**
 Travelling Expenses (if any) £ _____ When received, **14.4.0 on 12.6.29**
 H. L. Lister
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 18 JUN 1929**

Assigned **TRANSMIT TO LONDON**

TUE. 18 MAR 1930
 See Eng. J. 6 4654
 Lloyd's Register Foundation