

REPORT ON BOILERS.

No. 18954.

Received at London Office

12 SEP 1928

Date of writing Report 24.7.28 When handed in at Local Office 4th Sept. 1928 Part of Greenock

No. in Reg. Book. Survey held at Greenock Date, First Survey 6th September 1928 Last Survey 5th September 1928

on the S/S "Bellcorado" (Number of Visits ✓) Tons { Gross Net

Master Built at P. Glasgow By whom built Lithgow & Co. Yard No. 805 When built 1928

Engines made at Greenock By whom made John & McCand. & Co. Engine No. 643 When made 1928

Boilers made at ditto By whom made ditto Boiler No. 613 When made 1928

Nominal Horse Power Owners Bell Bros Port belonging to Glasgow

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

Manufacturers of Steel Swiss 2030 Vreughe Stahlwerke (Letter for Record S)

Total Heating Surface of Boilers 67.86 Is forced draught fitted yes Coal or Oil fired Coal

No. and Description of Boilers 3 Single ended 3SB. Working Pressure 200

Tested by hydraulic pressure to 350 Date of test 9.2.28 No. of Certificate 1804 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 53.74 No. and Description of safety valves to each boiler Double Spring

Area of each set of valves per boiler { per Rule 649 as fitted 404 Pressure to which they are adjusted 205 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 4.0 Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2.8 Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 14.4684 Length 11.6 Shell plates: Material S Tensile strength 28.32

Thickness 15/16 Are the shell plates welded or flanged Description of riveting: circ. seams { end DR inter. Pitch of rivets { 4.019 9 1/2

long. seams TR.D.B.S Diameter of rivet holes in { circ. seams 3 1/8 long. seams Percentage of strength of circ. end seams { plate 65.4 rivets 46.6 Percentage of strength of circ. intermediate seam { plate 85.52 rivets 91.75

Percentage of strength of longitudinal joint { plate 85.52 rivets 91.75 combined 89.37 Working pressure of shell by Rules 201.8

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

Material S Tensile strength 26.30 Smallest outside diameter 3.6188

Length of plain part { top Thickness of plates { crown 19/32 bottom Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 204

End plates in steam space: Material S Tensile strength 26.30 Thickness 19/32 Pitch of stays 19 3/4 x 21

How are stays secured D.N. + W. Working pressure by Rules 209

Tube plates: Material { front S back Tensile strength { 26.30 Thickness { 15/16 3/4

Mean pitch of stay tubes in nests 9 9/32 Pitch across wide water spaces 13 3/4 Working pressure { front 204 back 204

Girders to combustion chamber tops: Material S Tensile strength 28.32 Depth and thickness of girder at centre 9 3/4 x 3 1/4 (2) Length as per Rule 2. 9.063 Distance apart 9 No. and pitch of stays in each 3 at 8 1/8 Working pressure by Rules 204

Tensile strength 26.30 Thickness: Sides 2 1/32 Back 1 1/16 Top 2 1/32 Bottom 7/8

Pitch of stays to ditto: Sides 9 x 8 1/8 Back 8 7/8 x 9 1/4 Top 8 1/8 x 9 Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 200 Front plate at bottom: Material S Tensile strength 26.30

Thickness 15/16 Lower back plate: Material S Tensile strength 26.30 Thickness 27/32

Pitch of stays at wide water space 14 Are stays fitted with nuts or riveted over Nuts

Working Pressure 207 Main stays: Material S Tensile strength 28.32

Diameter { At body of stay, or Over threads 3 3/8 No. of threads per inch 6 Area supported by each stay 414.75

Working pressure by Rules 215 Screw stays: Material S Tensile strength 26.30

Diameter { At turned off part, or Over threads 1 3/4 x 1 5/8 No. of threads per inch 9 Area supported by each stay 81.2

Working pressure by Rules **206**. Are the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, **17/8"** or Over threads ☒

No. of threads per inch **9** Area supported by each stay **102"** Working pressure by Rules **206**

Tubes: Material **Iron** External diameter { Plain } **23/4** Thickness { **9WG** } **5/16" 3/8" 7/16"** No. of threads per inch **9**

Pitch of tubes **4 x 3 1/2" 1/16"** Working pressure by Rules **203** Manhole compensation: Size of opening in shell plate **16 1/2" x 20 1/2"** Section of compensating ring **32" x 36" x 1 1/2"** No. of rivets and diameter of rivet holes **36 at 1 3/32"**

Outer row rivet pitch at ends **9 13/16"** Depth of flange if manhole flanged **4"** 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 23 inclusive for boilers been complied with **---**

FOR JOHN G. KINCAID & COY. LIMITED

The foregoing is a correct description, **---** Manufacturer.

Dates of Survey { During progress of work in shops - - - } **See Machinery Report.** 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 **---**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These Boilers have been built under Special Survey in accordance with the approved plans. The workmanship & material are of good quality. They are now securely fitted on board and ready to run. Found satisfactory. This Report accompanies that of the Machinery.**

Survey Fee **£** **Charged on Machinery** When applied for, **192** When received, **192**

Wm. Gordon-Muir
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 11 SEP 1928**

Assigned **See accompanying mach. report.**

