

## REPORT ON BOILERS.

No. 83303

110 AUG 1955

Received at London Office

of writing Report 14<sup>th</sup> Feb 1955 When handed in at Local Office 2.3.55 Port of Glasgow

Survey held at Bowling Date, First Survey 19<sup>th</sup> May 1954 Last Survey 16<sup>th</sup> February 1955

on the Sheriff (Number of Visits 13) Tons { Gross Net

at Bowling By whom built Scott & Sons Yard No. 404 When built 1955

made at By whom made Engine No. When made

made at Glasgow By whom made Barclay, Currie & Co. Ltd Boiler No. 53-2 When made 1955

per Rule Owners Port belonging to

## TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

facturers of Steel Colvilles, Ltd.

Heating Surface of Boilers 2982 sq. ft. Of Superheaters ✓

for Register Book 2982 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil

and Description of Boilers One Single Ended Multitubular Working Pressure 200 lb. sq. in.

by hydraulic pressure to 350 lb. sq. in. Date of test 1-2-55 No. of Certificate 24352 Can each boiler be worked separately ✓

of Firegrate in each Boiler 68.9 sq. ft. No. and Description of safety valves to each boiler 1-2 1/2 high lift safety spring

of each set of valves per boiler { per Rule 8.66 sq. in. as fitted 9.8 sq. in. Pressure to which they are adjusted Are they fitted with easing gear

of donkey boilers, state whether steam from main boilers can enter the donkey boiler

est distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers

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

st internal dia. of boilers 16'-0" Length 12'-0" Shell plates: Material SM Steel Tensile strength 29-33 tons

ion welded, state name of welding Firm ✓ Have all the requirements of the Rules for Class I vessels

Complied with ✓ Thickness 1 13/32 Are the shell plates welded or flanged ✓ Description of riveting: circ. seams { end DR Lap inter ✓

seams TR DBS Diameter of rivet holes in { circ. seams 1 7/16 long. seams 1 7/16 Pitch of rivets { 10" 4.228"

tage of strength of circ. end seams { plate 66.3 rivets 42.8 Percentage of strength of circ. intermediate seam { plate ✓ rivets ✓

tage of strength of longitudinal joint { plate 85.6 rivets 85.8 combined 88.4

ess of butt straps { outer 1 1/16 inner 1 3/16 No. and Description of Furnaces in each Boiler 3 Doughton section

SM Steel Tensile strength 26-30 tons Smallest outside diameter 47 1/4"

of plain part { top ✓ bottom ✓ Thickness of plates 2 1/32 Description of longitudinal joint Welded

ions of stiffening rings on furnace or c.c. bottom ✓

ates in steam space: Material SM Steel Tensile strength 26-30 tons Thickness 1 3/8 Pitch of stays 2 1/2 x 19"

e stays secured Screwed and double nuts

lates: Material { front SM Steel back " " Tensile strength { 26-30 tons 26-30 tons Thickness { 2 3/32 3/4

itch of stay tubes in nests Pitch across wide water spaces 13 1/2"

to combustion chamber tops: Material SM Steel Tensile strength 28-32 tons Depth and thickness of girder

2 plates 11 x 7/8 Length as per Rule 3'-4 17/32 Distance apart 8 1/4" center, 9 3/4" wings No. and pitch of stays

3 stays 10" pitch Combustion chamber plates: Material SM Steel

trench 26-30 tons Thickness: Sides 2 3/32 Back 2 3/32 Top 2 3/32 Bottom 2 3/32

stays to ditto: Sides 10 x 9 3/4 Back 9 3/4 x 9" Top 10 x 9 3/4 Are stays fitted with nuts or riveted over Nuts

ate at bottom: Material SM Steel Tensile strength 26-30 tons

Lower back plate: Material SM Steel Tensile strength 26-30 tons Thickness 13/16

stays at wide water space 13 1/2 x 9" Are stays fitted with nuts or riveted over Nuts

ys: Material SM Steel Tensile strength 28-32 tons

At body of stay 3 3/8 No. of threads per inch 6 threads per inch

Over threads 3 3/4 + back end

ays: Material SM Steel Tensile strength 26-30 tons

At turned off part ✓ No. of threads per inch 9 threads per inch

Over threads 2 1/2, 1 7/8, 1 3/4



Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, or Over threads. 2 1/8, 1 3/8.

No. of threads per inch 9 threads per inch.

Tubes: Material Hot Rolled Milled Steel. External diameter { Plain 2 1/2 and 2 3/4 of standard Thickness { 9 W.G. 3 1/2, 5/16 No. of threads per inch 9 threads

Pitch of tubes 3 3/4 x 3 3/4 Manhole compensation: Size of opening 40 - 1 7/16

shell plate 21 x 17 Section of compensating ring 19 1/2 x 1 13/32 No. of rivets and diameter of rivet holes 40 - 1 7/16

Outer row rivet pitch at ends 10 Depth of flange if manhole flanged 4 1/4 Steam Dome: Material None

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 ✓ Thickness of crown ✓ No. and diameter of stays ✓ Inner radius of crown ✓

How connected to shell ✓ Size of doubling plate under dome ✓ Diameter of rivet holes ✓

of rivets in outer row in dome connection to shell ✓

Type of Superheater None Manufacturers of { Tubes ✓ Steel forgings ✓ 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 from the boiler ✓

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 ✓

Pressure to which the safety valves are adjusted ✓ Hydraulic test ✓

tubes ✓ forgings and castings ✓ and after assembly in place ✓ Are drains ✓

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 ✓

FOR BARCLAY CURTIS & CO. LTD.  
The foregoing is a correct description,  
Wm. G. Brownell  
Chief Engineer

Dates of Survey while building { During progress of work in shops - - 1954 May 19. Jun 14. 15. 23. 24. 1955 Jan. 14. 21. 24. 26. 31. Feb. 1. 4. 16. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓

Total No. of visits 13

Is this Boiler a duplicate of a previous case No. If so, state Vessel's name and Report No. ✓

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler has been constructed in accordance with the Rules and approved plans. Materials and workmanship have been found good. The boiler, in our opinion, will be eligible to be classed with the main machinery when efficiently installed on board the vessel.

SMU  
213955

J.  
17/5/55

Survey Fee ... £ 36: - : - When applied for, ... 19...  
Travelling Expenses (if any) £ - : 13 : - When received ... 19...

A.B. Simlaio & W. W. Mants.  
Engineer Surveyor to Lloyd's Register of

Committee's Minute GLASGOW 8 MAR 1955  
Assigned Deferred for completion.