ot. 5e.

GLASGOW REPORT No. 56559

REPORT ON BOILERS. No. 56298

Date of writing Report 1-11-1935 When handed in at Local Office 4·11·1935 Received at London Office 6 NOV 1935 Port of Glasgow

No. in Reg. Book. Survey held at Annan Date, First Survey 20·9·35 Last Survey 31-10-1935 (Number of Visits 8)

on the Boiler No 13170 S.S. "MAHOON" Tons Gross 788 Net 363

Master Built at Bowling By whom built Leith & Lons When built 1936

Boilers made at Annan By whom made Cochran & Co. Annan Ltd When made

Owners Smith Coasters (Proprietary) Ltd Port belonging to Port Natal

---

VERTICAL DONKEY BOILER— No. 1 Description Cochran Manufacturers of steel Steel Co. S'land

Made at Annan By whom made Cochran & Co. Annan Ltd When made 1925 Where fixed Fore end, Boiler room Working pressure 100

Tested by hydraulic pressure to 200 Date of test 31-10-35 No. of Certificate 19626 Fire grate area Description of safety valves Double spring

No. of safety valves 2 Area of each 3·14 sq" Pressure to which they are adjusted 100 If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler Yes. Diameter of donkey boiler 6'-0" Length 14'-0" Material of shell plates S. Thickness 7/16" - 17/32"

Range of tensile strength 28-32 Description of riveting long. seams D.R.L. Diameter of rivet holes 25/32" Whether punched or drilled drilled Pitch of rivets 2·625", 2·69", 2·673" Lap of plating 3 7/8" Per centage of strength of joint Rivets 67·1 Plates 70·25 Working pressure of shell by rules 108 Thickness of shell crown plates 13/16" - 13/32" Radius of do. 3'-0" No. of stays to do. None Diameter of stays None Diameter of

Furnace—Top None Bottom 5'-0" Length of furnace 2'-7 3/16" Thickness of furnace side plates 1/2" Description of joint Seamless Working pressure of furnace by rules 137·5 Thickness of Ogee ring 13/16" Working pressure of Ogee ring by rules 101·2 Thickness of furnace crown plates 1/2" Radius of do. 30" Stayed by Hemispheres Diameter of uptake 15" x 18" Thickness of uptake plates 9/16" Thickness of tube plates front 7/8" back 11/16" Mean pitch of stay tubes in nest 10·97" Pitch in outer vertical rows 7 1/2"

Diameter of tube holes FRONT stay 2 11/16" plain 2 9/16" BACK stay 2 1/2" plain 2 1/2" Working pressure of tube plates by rules F103·6, B108·6 Tubes: Material Iron

External diameter stay 2 1/2" plain 2 1/2" Thickness stay 11/32" plain 11 W.G. No. of threads per inch 9 Pitch of tubes 3 3/4" x 3 9/16"

Working pressure by rules 125 Manhole compensation; Size of opening in shell plate 16" x 12" Section of compensating ring 6" x 11/16" No. of rivets and diameter of rivet holes 36 - 25/32" Outer row pitch at ends 3 11/16"

FOR COCHRAN & CO., ANNAN, LTD
The foregoing is a correct description,
Galax. WORKS MANAGER *Manufacturer.*

Dates of Survey while building — During progress of work in shops— 1935 Sep: 20 23. 26 30 Oct: 9 17. 26. 31 Drawing No. 21265

During erection on board vessel — Total No. of visits 8 Is the approved plan of boiler forwarded herewith Copy.

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 and the Society's Rules and requirements the materials and workmanship are good.

4/11/35. 8/11/35.

The boiler is to the order of Aitchison Blair & Co. Ltd for their Engine No 197.

This boiler has now been satisfactorily fitted in the vessel Examined under steam & its safety valves adjusted. Accumulation test satisfactory.

J. Deith. H. Southerst

Survey Fee ... ... £ 4 : 4 : When applied for ... 19...

Travelling Expenses (if any) £ : : When received ... 19...

MONTHLY ACCOUNT

Jas. S. Cairns.
Engineer Surveyor to Lloyd's Register of Shipping.
4 FEB 1936

Committee's Minute GLASGOW 5 NOV 1935

Assigned TRANSMIT TO LONDON

GLASGOW
SEE ACCOMPANYING MACHINERY REPORT.
WED. 15 APR 1936

003328-003332-0180

Working pressure by Rules 205 *Are the stays drilled at the outer ends* no *Margin stays: Diameter* {*At turned off part, or Over threads* 1 3/4"

No. of threads per inch 9 *Area supported by each stay* 910" *Working pressure by Rules* 200

Tubes: *Material* steel *External diameter* {*Plain* 3 1/4" *Stay* 3 1/4" *Thickness* {8 w.g. / 1/4" 5/16" 3/8"} *No. of threads per inch* 9

Pitch of tubes 4 3/8" × 4 1/2" *Working pressure by Rules* 230 **Manhole compensation:** *Size of open*

shell plate 15 1/2" × 19 1/2" *Section of compensating ring* 10 1/4" × 1 3/8" *No. of rivets and diameter of rivet holes* 32 @ 1 7/16"

Outer row rivet pitch at ends 9 7/8" *Depth of flange if manhole flanged* 3" **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 ... *Working pressure by Rules* ... *Thickness of crown* ... *No. and diame*

stays ... *Inner radius of crown* ... *Working pressure by Rules* ...

How connected to shell ... *Size of doubling plate under dome* ... *Diameter of rivet holes and*

of rivets in outer row in dome connection to shell ...

Type of Superheater none *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 o*

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*

Rules ... *Pressure to which the safety valves are adjustea* ... *Hydraulic test pres*

tubes ..., *castings* ... *and after assembly in place* ... *Are drain cocks or valves*

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,
For David Rowan & Co. Ltd
Arch. H. Grierson *Manufa*

Dates of Survey while building — *During progress of work in shops* - - 1935 Sep. 9. 25 Oct. 17. 30

During erection on board vessel - - - Nov. 5. 16. 20. 21. 26

Are the approved plans of boiler and ~~superheater~~ forwarded herewith yes
(If not state date of approval.)

Total No. of visits 9

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 workmanship and materials are good.
The boiler has been constructed under Special Survey.
It will be fitted on board the vessel at Glasgow.

29/11/35.

This boiler has now been satisfactorily fitted in the vessel, steamed under steam & its safety valves adjusted. Accumulation test satisfactory.

H Watt. H Smethurst

Survey Fee ... ... £ 14 : 16 :
Travelling Expenses (if any) £ : :

When applied for, 29. 11. 1935.
When received, 12. 12. 1935
(Lon. Wd)

S. E. Davis.
Engineer Surveyor to Lloyd's Register of Ship

Committee's Minute GLASGOW 3 DEC 1935

Assigned TRANSMIT TO LONDON

GLASGOW 4 FEB 1936
SEE ACCOMPANYING MACHINERY REPO
WED. 15 AP