

REPORT ON BOILERS.

No. 90343

28 JUL 1933

Received at London Office

Date of writing Report *26.7.1933* When handed in at Local Office *26.7.1933* Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle-on-Tyne Date, First Survey 2nd June 1931 Last Survey 25.7.1933

Book No. 67 on the T. Sc. M. V. "PORT CHALMERS" (Number of Visits 13) Gross Tons 8526 Net Tons 5204

Built at Newcastle-on-Tyne By whom built Swan, Hunter & Wigham Richardson Yard No. 1483 When built 1933

Engines made at Glasgow By whom made Barclay Curle & Co. Ltd. Engine No. EW.105 When made 1933

Boilers made at Newcastle (Scotswood) By whom made Spencer-Hopwood, Ltd. Boiler No. CB.208 When made 1933

Owners Commonwealth & Dominion Line Ltd. Port belonging to London

VERTICAL DONKEY BOILER.

Made at Scotswood By whom made Spencer-Hopwood, Ltd. Boiler No. CB.208 When made 1933 Where fixed E. Room port side

Manufacturers of Steel The Steel Company of Scotland, Ltd.

Grating Heating Surface of Boiler 47.6 sq ft Is forced draught fitted Coal or Oil fired oil

Description of Boilers One Spencer-Hopwood (N=3 Standard Type) Working pressure 150 lbs./sq in

Tested by hydraulic pressure to 275 lbs./sq in Date of test 3rd July, 1933 No. of Certificate 596

Area of Firegrate in each Boiler 3.75 sq ft No. and Description of safety valves to each boiler one spring loaded

Pressure of each set of valves per boiler 3.14 Pressure to which they are adjusted 100 lbs./sq in Are they fitted with easing gear yes

Whether steam from main boilers can enter the donkey boiler Smallest distance between boiler or uptake and bunkers 90

Is oil fuel carried in the double bottom under boiler Smallest distance between base of boiler and tank top plating 7'-3"

Is the base of the boiler insulated Largest internal dia. of boiler 2'-6" Height 7'-3"

Shell plates: Material Steel Tensile strength 28/32 tons/sq in Thickness 3/8"

Are the shell plates welded or flanged no Description of riveting: circ. seams S.R. long. seams DR. Lap

No. of rivet holes in { circ. seams 13/16" Pitch of rivets 2.0" Percentage of strength of circ. seams { plate 59.37 rivets 56.8 of Longitudinal joint { plate 69.4 rivets 87.6 combined 87.6

Working pressure of shell by rules 223 lbs./sq in Thickness of butt straps { outer - inner -

Crown: Whether complete hemisphere, dished partial spherical, or flat flat Material steel

Tensile strength 26/30 tons/sq in Thickness 7/16" Radius - Working pressure by rules 165 lbs./sq in

Description of Furnace: Plain, spherical, or dished crown plain Material steel Tensile strength 26/30 tons/sq in

Thickness 7/16" External diameter { top 33" bottom 2-1 1/2" Length as per rule 3-1 1/2" Working pressure by rules 156 lbs./sq in

Are support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Clearance of stays over thread Radius of spherical or dished furnace crown Working pressure by rule 164 lbs./sq in

Thickness of Ogee Ring Diameter as per rule { D a Working pressure by rule 164 lbs./sq in

Combustion Chamber: Material Tensile strength Thickness of top plate

Working pressure by rule Thickness of back plate Diameter if circular

Working pressure by rule Pitch of stays Are stays fitted with nuts or riveted over

Clearance of stays over thread Working pressure of back plate by rules

Plates: Material { front steel back steel Tensile strength 26/30 tons/sq in Thickness 7/16" Mean pitch of stay tubes in nests 6 1/4"

Working pressure by rule { front 164 lbs./sq in back 164 lbs./sq in

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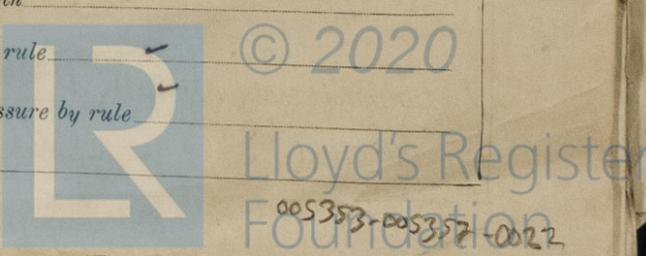
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Crown stays: Material Tensile strength Diameter at body of stay or over threads

No. of threads per inch Area supported by each stay Working pressure by rules

Screw stays: Material Tensile strength Diameter at turned off part or over threads No. of threads per inch

Area supported by each stay Working pressure by rules Are the stays drilled at the outer ends

Water Tubes: Material *Sp Steel* External diameter plain *2 1/4"* Thickness *10 W.G. 1/4"*

No. of threads per inch *11* Pitch of tubes *3 1/8" x 3 1/8"* Working pressure by rules *193 lbs./sq. in.*

Manhole Compensation: Size of opening in shell plate *8 3/16" x 5 1/8"* Section of compensating ring *4 5/16"* No. of rivets and dia. of rivet holes *12 R. 13/16" dia.* Outer row rivet pitch at ends *3"* Depth of flange if manhole flanged

Uptake: External diameter *9"* Thickness of uptake plate *7/16"*

Cross Tubes: No. External diameters Thickness of plates

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

The foregoing is a correct description,
For: *Spencer-Hopwood Ltd.*
H. Mackintosh Manufacturer

1931
 Dates of Survey while building: During progress of work in shops - *June 2, 16, Aug. 5, 21, Sep. 3, 9, 11, 16, Nov. 3, 18.* Is the approved plan of boiler forwarded herewith *Yes*
 1933 *July 3, 7, 25.* (If not state date of approval.)
 Total No. of visits *13.*

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under special survey in accordance with the rules and approved plan. The materials and workmanship are good; the shell extension (ash pit) has increased 12" over the standard type boiler. The boiler is intended to be fitted in the T.S.M.V. N° 1483 being constructed Messrs. Swan, Hunter & Wigham Richardson, Ltd., Wallsend.*

This boiler has been satisfactorily installed in the vessel; the safety valves adjusted under steam; boiler examined under steam and found satisfactory. This boiler is intended for domestic purposes.
H. B. Forster,
Newcastle-on-Tyne,
27th Decr, 1933

Balance of Survey Fee ... £ *1 : 11 : 6* When applied for, *27 JUL 1933*
 Travelling Expenses (if any) £ : : When received, *5th Sept 1933*

H. B. Forster
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *FRI. 5 JAN 1934*
 Assigned *See New Rpt. 90866*

