

REPORT ON BOILERS.

No. 80034.

Received at London Office.

18 MAR 1953

Reporting Report... 15.3.1953 When handed in at Local Office... 15.3.1953 Port of... **GLASGOW**
 Survey held at... **GLASGOW** Date, First Survey... 23.6.1949 Last Survey... 11.3.1953
 on the... **SCREW MOTORSHIP "POLARTANK"** (Number of Visits... 108) Tons { Gross... 12651 Net... 724.7
 Built at... **GLASGOW** By whom built... **BARCLAY CURLE & CO. LTD.** Yard No. 724. When built... 1953-3.
 made at... **GLASGOW** By whom made... **BARCLAY CURLE & CO. LTD.** Engine No. 724. When made... 1953-3.
 made at... **GLASGOW** By whom made... **BARCLAY CURLE & CO. LTD.** Boiler No. 724. When made... 1953-3.
 Horse Power... Owners... *William Wilson & Co. Ltd.* Port belonging to... *Harwick.*

TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

makers of Steel... **COLVILLES LTD.** (Letter for Record... **S.**)
 Heating Surface of Boilers... **6118 sq. ft.** Is forced draught fitted... **YES** Coal or Oil fired... **OIL & EXHAUST GASES.**
 Description of Boilers... **2 - CYLINDRICAL MULTITUBULAR** Working Pressure... **180 LBS. sq. in.**
 hydraulic pressure to... **320 LBS. sq. in.** Date of test... **3.10.52** No. of Certificate... **23738 (PORT) 23739 (STARBOARD)** Can each boiler be worked separately... **YES**
 Firegrate in each Boiler... **✓** No. and Description of safety valves to each boiler... **1-2 1/2 DOUBLE, SPRING LOADED, 1/2 IN. HIGH LIFT.**
 each set of valves per boiler { per Rule... **9.8 sq. in.** as fitted... **9.8 sq. in.** Pressure to which they are adjusted... **180 LBS. sq. in.** Are they fitted with easing gear... **YES**
 If donkey boilers, state whether steam from main boilers can enter the donkey boiler... **NO MAIN BOILERS.**
 distance between boilers or uptakes and bunkers or woodwork... **✓** Is oil fuel carried in the double bottom under boilers... **✓**
 distance between shell of boiler and tank top plating... **✓** Is the bottom of the boiler insulated... **YES**
 internal dia. of boilers... **15'-6"** Length... **12'-0"** Shell plates: Material... **STEEL** Tensile strength... **29-33 TONS**
 1/4" Are the shell plates welded or flanged... **NO** Description of riveting: circ. seams { end... **DR LAP.** inter... **NONE.**
TR. R. D.B.S. Diameter of rivet holes in { circ. seams... **1 5/16"** long. seams... **1 5/16"** Pitch of rivets { **3.97"** **9 1/8"**
 of strength of circ. end seams { plate... **66.9** rivets... **43.1** Percentage of strength of circ. intermediate seam { plate... **85.6** rivets... **88.0**
 of strength of longitudinal joint { plate... **85.6** rivets... **88.0** combined... **88.8** Working pressure of shell by Rules... **AS APPROVED.**
 of butt straps { outer... **1 5/16"** inner... **1 1/16"** No. and Description of Furnaces in each Boiler... **3 - CORRUGATED DEIGHTON SECTION.**
STEEL. Tensile strength... **26-30 TONS.** Smallest outside diameter... **4 5/4"**
 of plain part { top... **✓** bottom... **✓** Thickness of plates { crown... **9/16"** bottom... **✓** Description of longitudinal joint... **FUSION WELDED.**
 of stiffening rings on furnace or c.c. bottom... **NONE.** Working pressure of furnace by Rules... **AS APPROVED.**
 plates in steam space: Material... **STEEL** Tensile strength... **26-30 TONS.** Thickness... **1 5/16"** Pitch of stays... **as approved.**
 stays secured... **NUTS BOTH SIDES OF PLATE** Working pressure by Rules... **AS APPROVED.**
 plates: Material { front... **STEEL** back... **STEEL** Tensile strength... **26-30 TONS.** Thickness { **27/32"** **1/16"**
 of stay tubes in nests... **AS APPROVED.** Pitch across wide water spaces... **13 1/2"** Working pressure { front... **AS APPROVED.** back... **AS APPROVED.**
 to combustion chamber tops: Material... **STEEL** Tensile strength... **28-32 TONS.** Depth and thickness of girder... **WING CC. 10 1/4" CENTRE CC. 6 3/4"**
9 3/4" x (7 1/2" + 7 1/2") Length as per Rule... **3'-0 5/8"** Distance apart... **WING CC. 10 1/4" CENTRE CC. 6 3/4"** No. and pitch of stays... **3 AT 8 3/4"**
 Working pressure by Rules... **AS APPROVED** Combustion chamber plates: Material... **STEEL**
 strength... **26-30 TONS.** Thickness: Sides... **1/16"** Back... **1/16"** Top... **1/16"** Bottom... **1 1/16"**
 stays to ditto: Sides... **8 3/4" x 10 1/4"** Back... **WING CC 9 1/2" x 9 1/2" 8 3/4" x 10 1/4"** Top... **8 3/4" x 6 3/4"** Are stays fitted with nuts or riveted over... **NUTS.**
 pressure by Rules... **AS APPROVED.** Front plate at bottom: Material... **STEEL** Tensile strength... **26-30 TONS**
27/32" Lower back plate: Material... **STEEL** Tensile strength... **26-30 TONS.** Thickness... **25/32"**
 stays at wide water space... **13 1/2" x 9 1/2"** Are stays fitted with nuts or riveted over... **NUTS**
 pressure... **AS APPROVED.** Main stays: Material... **STEEL** Tensile strength... **28-32 TONS.**
 At body of stay... **3 1/4"** No. of threads per inch... **6** Area supported by each stay... **AS APPROVED.**
 Over threads... **FRONT 3 1/4" BACK 3 5/8"**
 pressure by Rules... **AS APPROVED.** Screw stays: Material... **STEEL** Tensile strength... **26-30 TONS**
 At turned off part... **1 7/8" x 1 1/4"** No. of threads per inch... **9** Area supported by each stay... **AS APPROVED.**
 Over threads...



Lloyd's Register Foundation

G04564-004572-0277

Working pressure by Rules AS APPROVED Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part 1 1/8" or Over threads AS APPROVED

No. of threads per inch 9 Area supported by each stay AS APPROVED Working pressure by Rules AS APPROVED

Tubes: Material SD STEEL. H.R. External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 3/8" 5/16" No. of threads per inch 9 W.G.

Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules AS APPROVED Manhole compensation: Size of shell plate 20 1/2" x 16 1/2" Section of compensating ring 1-7 3/8" x 1 1/4" No. of rivets and diameter of rivet holes 40 AT 1 5/16"

Outer row rivet pitch at ends 4 1/8" Depth of flange if manhole flanged 3 7/8" Steam Dome: Material AS APPROVED

Tensile strength AS APPROVED Thickness of shell AS APPROVED Description of longitudinal joint AS APPROVED

Diameter of rivet holes AS APPROVED Pitch of rivets AS APPROVED Percentage of strength of joint AS APPROVED

Internal diameter AS APPROVED Working pressure by Rules AS APPROVED Thickness of crown AS APPROVED No. and stays AS APPROVED

Inner radius of crown AS APPROVED Working pressure by Rules AS APPROVED

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

of rivets in outer row in dome connection to shell AS APPROVED

Type of Superheater NONE. Manufacturers of { Tubes AS APPROVED Steel forgings AS APPROVED Steel castings AS APPROVED

Number of elements AS APPROVED Material of tubes AS APPROVED Internal diameter and thickness of tubes AS APPROVED

Material of headers AS APPROVED Tensile strength AS APPROVED Thickness AS APPROVED Can the superheater be the boiler be worked separately AS APPROVED

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler AS APPROVED

Area of each safety valve AS APPROVED Are the safety valves fitted with casing gear AS APPROVED Working pressure AS APPROVED

Rules AS APPROVED Pressure to which the safety valves are adjusted AS APPROVED Hydraulic loss AS APPROVED

tubes AS APPROVED forgings and castings AS APPROVED and after assembly in place AS APPROVED Are the valves fitted to free the superheater from water where necessary AS APPROVED

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

The foregoing is a correct description
FOR BARCLAY, CURLE & CO., LTD.
Wm. G. Brindley

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.) 21.5.49.

while building { During erection on board vessel - - - AS APPROVED Total No. of visits AS APPROVED

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The two boilers have been constructed and surveyed in accordance with the Rules and the approved plans, the materials and workmanship being found satisfactory. Afterwards the boilers have been efficiently installed on board the vessel, safety valves adjusted as above, assumed to be carried out, tested under full working conditions and found satisfactory. The boilers are, in my opinion, eligible to be classed in the Register Book, with the main machinery.

See Machinery Report.

Survey Fee £ see Machinery Report. When applied for.....19.....

Travelling Expenses (if any) £ see Machinery Report. When received.....19.....

W. G. Brindley
Engineer Surveyors to Lloyd's Register

Committee's Minute GLASGOW 17 MAR 1953

Assigned SEE ACCOMPANYING MACHINERY REPORT