

REPORT ON BOILERS.

No. 51028

Received at London Office 26 NOV 1930

Date of writing Report 21-11-1930 When handed in at Local Office 25-11-1930 Part of GLASGOW

No. in Reg. Book. Survey held at GLASGOW Date, First Survey 9-4-30 Last Survey 18-11-1930

on the MV. POLARTANK (Number of Visits 41) Tons { Gross 6356 Net 3872

Master Built at GLASGOW By whom built BARCLAY CURLE & CO LD Yard No. 645 When built 1930

Engines made at GLASGOW By whom made BARCLAY CURLE & CO LD Engine No. 645 When made 1930

Boilers made at GLASGOW By whom made BARCLAY CURLE & CO LD Boiler No. 645 When made 1930

Nominal Horse Power Owners HVALFANGERSELSKAPET - POLARIS A/S Port belonging to LARVIK
MANAGERS - MELSOM & MELSOM.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY. & WASTE-HEAT.

Manufacturers of Steel D. COLVILLE & SONS LD. 14" BEARDMORE & CO LD (Letter for Record (S))

Total Heating Surface of Boilers 2242 sq. ft. Is forced draught fitted NO. Coal or Oil fired OIL.

Working Pressure 120 LBS.

No. and Description of Boilers

Tested by hydraulic pressure to 230 LBS. Date of test 8-10-30 No. of Certificate 18838. Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 36.6 sq. ft. No. and Description of safety valves to each boiler 2. SPRING-LOADED (H.L.)

Area of each set of valves per boiler { per Rule 11.88 sq. ft. as fitted Pressure to which they are adjusted 120 LBS. 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 WELL CLEAR Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating BOILER ON UPPER FLAT Is the bottom of the boiler insulated YES.

Largest internal dia. of boilers 13'-6" Length 11'-0" Shell plates: Material STEEL Tensile strength 29/33 Tons. ✓

Thickness 3/4" Are the shell plates welded or flanged NO Description of riveting: circ. seams { end DR. inter. ✓

long, seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 15/16" long, seams 13/16" Pitch of rivets { 3.008" plate ✓ rivets 6. ✓

Percentage of strength of circ. end seams { plate 48.51% rivets 86.45% Percentage of strength of circ. intermediate seam { plate 85.58% rivets 90.02% Working pressure of shell by Rules 122 LBS.

Thickness of butt straps { outer 9/16" inner 11/16" No. and Description of Furnaces in each Boiler 2. DEIGHTON SECTION.

Material STEEL Tensile strength 26-30 TONS. Smallest outside diameter 3'-4 3/4"

Length of plain part { top ✓ bottom ✓ Thickness of plates { crown 3/8" bottom 1/2" Description of longitudinal joint WELD.

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 168 LBS.

End plates in steam space: Material STEEL Tensile strength 26-30 TONS Thickness 1" Pitch of stays 19 1/2" x 19 1/2" ✓

How are stays secured D.N. Working pressure by Rules 120 LBS.

Tube plates: Material { front STEEL back STEEL Tensile strength { 26-30 TONS Thickness { 23/32" 5/8" Working pressure { front 130 LBS. back 121 "

Mean pitch of stay tubes in nests 10.6" Pitch across wide water spaces 13 7/8" ✓

Girders to combustion chamber tops: Material STEEL Tensile strength 28/32 TONS Depth and thickness of girder at centre 8 1/4" x 9 1/16" DOUBLE Length as per Rule 32.78" Distance apart 10" No. and pitch of stays

in each 2 @ 10" Working pressure by Rules 123 LBS. Combustion chamber plates: Material STEEL

Tensile strength 26-30 TONS Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 19/32" ✓

Pitch of stays to ditto: Sides 10" x 10" Back 10 1/2" x 9 1/2" Top 10" x 10" Are stays fitted with nuts or riveted over NUTS.

Working pressure by Rules 120 LBS. Front plate at bottom: Material STEEL Tensile strength 26/30 TONS

Thickness 23/32" ✓ Lower back plate: Material STEEL Tensile strength 26/30 TONS Thickness 11/16" ✓

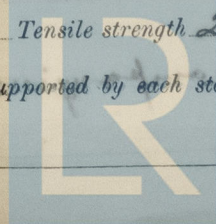
Pitch of stays at wide water space 14 1/4" ✓ Are stays fitted with nuts or riveted over NUTS

Working Pressure 129 LBS. Main stays: Material STEEL Tensile strength 28/32 TONS.

Diameter { At body of stay, 2 7/8" No. of threads per inch 6 Area supported by each stay 380 sq. in. ✓

Working pressure by Rules 130 LBS. Screw stays: Material STEEL Tensile strength 26/30 TONS

Diameter { At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 100 sq. in. ✓



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Working pressure by Rules 125 lb Are the stays drilled at the outer ends NO Margin stays: Diameter 1 7/8"
No. of threads per inch 9 Area supported by each stay 114 0" Working pressure by Rules 130 LBS
Tubes: Material IRON External diameter 3" Plain WINGS 3" CENTRE 1 3/4" Thickness 1/4" No. of threads per inch 9
Pitch of tubes (4 1/4" x 4 1/4") (2 3/4" x 2 1/8") Working pressure by Rules 140 LBS Manhole compensation: Size of opening
shell plate 20 1/4" x 16 1/4" Section of compensating ring 24" x 3/4" No. of rivets and diameter of rivet holes 44 - 1"
Outer row rivet pitch at ends 7 1/4" Depth of flange if manhole flanged 4" Steam Dome: Material IRON
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint
Internal diameter Working pressure by Rules Thickness of crown No. and diameter
stays Inner radius of crown Working pressure by Rules
How connected to shell 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

Number of elements Material of tubes Manufacturers of Tubes
Material of headers Tensile strength Internal diameter and thickness of tubes
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 22 inclusive for boilers been complied with

BARCLAY, CURLE & CO., LTD.
John Curle
GENERAL MANAGER ENGINE WORKS.

The foregoing is a correct description,

Dates of Survey while building During progress of work in shops - See accompanying machinery report
During erect board vessel Are the approved plans of boiler and superheater forwarded herewith YES
(If not state date of approval)
Total No. of visits 41

Is this Boiler a duplicate of a previous case YES - EXCEPT FOR CENTRE BOX TUBES If so, state Vessel's name and Report No. ALCIDES. GLS RPT 50445.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey, to approved plans in accordance with the Society's Rules. Materials and workmanship are good. It has been properly fitted on board the vessel, and the safety valves adjusted to 120 lbs. under steam.

Survey Fee ...
Travelling Expenses (if any) ...
When applied for, 19
When received, 19

H. Sutherland
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 25 NOV 1930**

Assigned See accompanying machinery report