

REPORT ON BOILERS.

No. 19014

10 APR 1929

Received at London Office

Date of writing Report 28/2/1929 When handed in at Local Office 5/4/1929 Port of Greenock
 No. in Survey held at Greenock Date, First Survey 6th June 1928 Last Survey 5-4-1929
 Reg. Book. 511 " Atulducks (Number of Visits) Gross Tons }
 on the Atulducks Net Tons }
 Master P. E. Egan Built at P. E. Egan By whom built W. Hamilton & Co. Ltd. Yard No. 406 When built 1929
 Engines made at Greenock By whom made John McLeod & Co. Ltd. Engine No. K34 When made 1929
 Boilers made at ditto By whom made ditto Boiler No. N34 When made 1928
 Nominal Horse Power ✓ Owners United Oil Co. Ltd. Port belonging to London

MULTITUBULAR BOILERS ~~MAIN~~, AUXILIARY, ~~SP. POWER~~.

Manufacturers of Steel Steel Co. of Scotland & Kirkcaldy & Glasgow (Letter for Record S)
 Total Heating Surface of Boilers 1823 ft² Is forced draught fitted Approved Fuel Oil fired oil ✓

No. and Description of Boilers one single ended Working Pressure 180 ✓

Tested by hydraulic pressure to 320 Date of test 24.1.29 No. of Certificate 1854 Can each boiler be worked separately Yes ✓

Area of Firegrate in each Boiler 14.02 No. and Description of safety valves to each boiler Double Spring

Area of each set of valves per boiler 14.13 Pressure to which they are adjusted 185 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 5-0 Is oil fuel carried in the double bottom under boilers NO

Smallest distance between shell of boiler and tank top plating 14 1/2" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13.47/8" Length 11-0" Shell plates: Material S Tensile strength 28.32

Thickness 1 1/8" Are the shell plates welded or flanged ✓ Description of riveting: circ. seams end 3.85/5 inter ✓

long. seams TRIDBS Diameter of rivet holes in circ. seams 1 1/4" long. seams 1 3/16" Pitch of rivets 8 3/8"

Percentage of strength of circ. end seams plate 64.5 rivets 46.5 Percentage of strength of circ. intermediate seam plate 80.5 rivets 90.5

Percentage of strength of longitudinal joint plate 80.5 rivets 89.8 Working pressure of shell by Rules 184.5

Thickness of butt straps outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3 Deighton

Material S Tensile strength 26.30 Smallest outside diameter 3.0 15/16"

Length of plain part top ✓ bottom ✓ Thickness of plates crow 15/32" bottom ✓ Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 182

End plates in steam space: Material S Tensile strength 26.30 Thickness 13/32" Pitch of stays 18 1/2 x 18 1/2"

How are stays secured DN Washers Working pressure by Rules 181-6

Tube plates: Material front S back ✓ Tensile strength 26.30 Thickness 23/32"

Mean pitch of stay tubes in nests 10-8" Pitch across wide water spaces 14" Working pressure front 192 back 188

Girders to combustion chamber tops: Material S Tensile strength 28.32 Depth and thickness of girder 8 1/2"

at centre 9 1/2 x 7/8 (2) Length as per Rule 34.62 Distance apart 8 1/2" No. and pitch of stays S

in each 3 at 9" Working pressure by Rules 204 Combustion chamber plates: Material S

Tensile strength 26.30 Thickness: Sides 21/32" Back 21/32" Top 21/32" Bottom 21/32"

Pitch of stays to ditto: Sides 9 x 9 1/4" Back 8 1/2 x 9" Top 9 x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 183 ✓ Front plate at bottom: Material S Tensile strength 26.30 Thickness 25/32"

Thickness 1" Lower back plate: Material S Tensile strength 26.30 Thickness 25/32"

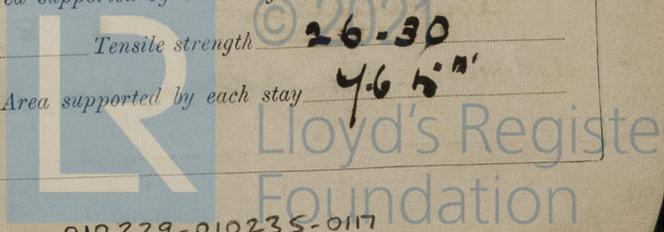
Pitch of stays at wide water space 13 3/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 183 Main stays: Material S Tensile strength 28-32

Shipping Diameter At body of stay 3" Over threads ✓ No. of threads per inch 6 Area supported by each stay 342.5"

Working pressure by Rules 196 ✓ Screw stays: Material S Tensile strength 26-30

Diameter At turned off part 1 1/8" Over threads ✓ No. of threads per inch 9 Area supported by each stay 46.5"



Working pressure by Rules **198** Are the stays drilled at the outer ends **880** Margin stays: Diameter **1 3/4"**
 No. of threads per inch **9** Area supported by each stay **100.62"** Working pressure by Rules **180.5**
 Tubes: Material **Iron** External diameter **3"** Thickness **9/16"** No. of threads per inch **9**
 Pitch of tubes **4 5/16" x 4 3/16"** Working pressure by Rules **192** Manhole compensation: Size of opening **15 1/16"**
 shell plate **20 1/2" x 16 1/2"** Section of compensating ring **2.11 x 2.4 x 1 3/16"** No. of rivets and diameter of rivet holes **36 at 1 5/16"**
 Outer row rivet pitch at ends **8 3/4"** Depth of flange if manhole flanged **3 1/2"** Steam Dome: Material
 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 of 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 same connection to shell

Type of Superheater Manufacturers of Tubes
 Number of elements Material of tubes Internal diameter and thickness of tubes
 Material of headers Tensile strength Thickness Can the superheater be shut off and 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 23 inclusive for boilers been complied with **yes**

The foregoing is a correct description,
 FOR JOHN G. KINCAID & COY, LIMITED
 Manufacturer

Dates of Survey { During progress of work in shops - - }
 while building { During erection on board vessel - - - }
 See Machinery Report
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **yes**
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been built under special survey in accordance with the approved plans and the workmanship & material are of good quality, it is now securely fitted on board. This report accounts for the machinery (Duplicate of 1135 Mr. Arthur Duke Greenock Rept. No. 18991.)**

Survey Fee **Charged on Machinery Rept.** £
 When applied for, 192
 When received, 192

W. Gordon Sinclair
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 9 APR 1929**

Assigned **See accompanying machinery report.**

