

REPORT ON BOILERS.

No. 190M

Received at London Office

10 APR 1929

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

on the M/V "A. P. L. Duckers" (Number of Visits) Gross Tons Net Tons

Master W. Hamilton C.L.A. Built at P. Glasgow By whom built W. Hamilton C.L.A. Yard No. 406 When built 1929

Engines made at Greenock By whom made John & Neicaid C.L.A. Engine No. 1734 When made 1929

Boilers made at ditto By whom made ditto Boiler No. 1734 When made 1929

Nominal Horse Power Owners United Motors C.L.A. Port belonging to London

MULTITUBULAR BOILERS ~~MAIN~~, AUXILIARY,

Manufacturers of Steel Stal C^o of Scotland, Walkmillner Bergbau (Letter for Record S)

Total Heating Surface of Boilers 1520.45 sq ft Is forced draught fitted arranged 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 Oil Fuel No. and Description of safety valves to each boiler Double Spring

Area of each set of valves per boiler 9.38 sq ft Pressure to which they are adjusted 180 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 lagged

Largest internal dia. of boilers 11-2 1/16" Length 10-6" Shell plates: Material S Tensile strength 28-32

Thickness 15/16" Are the shell plates welded or flanged Description of riveting: circ. seams DR

Long. seams TRIDBS Diameter of rivet holes in 1 1/8" Pitch of rivets 3.85"

Percentage of strength of circ. end seams 70.8 Percentage of strength of circ. intermediate seam

Percentage of strength of longitudinal joint 89.98 Working pressure of shell by Rules 182

Thickness of butt straps 23/32" No. and Description of Furnaces in each Boiler 2 Dighton

Material S Tensile strength 26-30 Smallest outside diameter 3-0 1/16"

Length of plain part Thickness of plates 15/32" 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 1 1/32" Pitch of stays 16 1/2 x 16 1/2"

How are stays secured with nuts Working pressure by Rules 181.6

Tube plates: Material Stal Tensile strength 26-30 Thickness 23/32"

Mean pitch of stay tubes in nests 9.78" Pitch across wide water spaces 14" Working pressure 184

Girders to combustion chamber tops: Material S Tensile strength 28-32 Depth and thickness of girder

at centre 8 1/4 x 3/4 (2) Length as per Rule 2.462 Distance apart 8 No. and pitch of stays

in each 2 at 10" Working pressure by Rules 183 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 8 x 10" Back 9 x 9 1/4" Top 8 x 10" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 180 Front plate at bottom: Material S Tensile strength 26-30

Thickness 1" Lower back plate: Material S Tensile strength 26-30 Thickness 25/32"

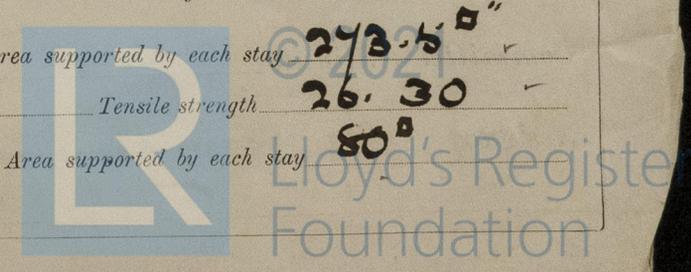
Pitch of stays at wide water space 13 3/4" Are stays fitted with nuts or riveted over Nuts

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

Diameter 2 1/8" No. of threads per inch 6 Area supported by each stay 273.5 sq in

Working pressure by Rules 184 Screw stays: Material S Tensile strength 26-30

Diameter 1 5/8" No. of threads per inch 9 Area supported by each stay 50 sq in



Working pressure by Rules **190** Are the stays drilled at the outer ends **910** Margin stays: Diameter **1 3/4"**
 No. of threads per inch **9** Area supported by each stay **103.45"** Working pressure by Rules **214**
 Tubes: Material **91022** External diameter **3"** Thickness **9 W G 1/4 5/8 5/16** No. of threads per inch **9**
 Pitch of tubes **4 1/4" x 4 3/16"** Working pressure by Rules **183** Manhole compensation: Size of opening in
 shell plate **20" x 16"** Section of compensating ring **2' 8 3/4" x 2' 4 3/4" x 1 1/2"** No. of rivets and diameter of rivet holes **38 at 1 1/8"**
 Outer row rivet pitch at ends **4 1/2"** 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 dome 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**
 FOR JOHN G. KINCAID & COY. LIMITED
 The foregoing is a correct description,
 W. Carter **DIRECTOR** Manufacturer.

Dates of Survey: During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith **Yes**
 while building: During erection on board vessel - - - (If not state date of approval.)
 See Machinery Report. Total No. of visits **1**

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 ship in accordance with the Machinery
 (Duplicate of N. 315. Mr. "A. H. Duke" Engineer Ref. N. 18991)

Survey Fee **Charged on Machinery Report** : } When applied for, 192
 Travelling Expenses (if any) : } When received, 192
 W. Gordon-Muir
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 9 APR 1929**
 Assigned **See accompanying machinery report.**

