

# REPORT ON BOILERS.

Received at London Office 20 AUG 1930

Date of writing Report 19 When handed in at Local Office 19. 8. 1930 Part of Glasgow

No. in Reg. Book Survey held at Glasgow Date, First Survey 17 12 29 Last Survey 18-8-1930

on the new steel M/V "LAUREL". (Number of Visits 68) Gross 100 1/4 Tons Net

Master Built at Blythwood By whom built Blythwood SBCo Yard No. 28 When built 1930

Engines made at Stockholm By whom made Aktieb Atlas Diesel Engine No. 50126 When made 1930

Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 930 When made 1930

Nominal Horse Power 848 Owners Rederietieb. oil Transporter Port belonging to Stockholm

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel James Dunlop & Co Ltd Norman Long & Co Ltd (Letter for Record 5)

Total Heating Surface of Boilers 3312 sq ft Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers two single ended. Working Pressure 150

Tested by hydraulic pressure to 275 Date of test 11-3-30 No. of Certificate 18638 Can each boiler be worked separately yes

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Improved High Lift

Area of each set of valves per boiler {per Rule 7.520, as fitted 9.820} Pressure to which they are adjusted 148 Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler - This pressure at Engineer's request

Smallest distance between boilers or uptakes and bunkers or woodwork remote Is oil fuel carried in the double bottom under boilers -

Smallest distance between shell of boiler and tank top plating Boilers on main deck Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 12'-6" Length 11'-0" Shell plates: Material steel Tensile strength 29-33 tons

Thickness 2 1/32 Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR, inter. DBS, TR}

long. seams DBS, TR Diameter of rivet holes in {circ. seams 15/16, long. seams 15/16} Pitch of rivets {2.6", 6 1/16"}

Percentage of strength of circ. end seams {plate 63.9, rivets 50.2} Percentage of strength of circ. intermediate seam {plate, rivets}

Percentage of strength of longitudinal joint {plate 85.98, rivets 91.2, combined 90.1} Working pressure of shell by Rules 151

Thickness of butt straps {outer 5/8", inner 3/4"} No. and Description of Furnaces in each Boiler Three Morrison.

Material steel Tensile strength 26-30 tons Smallest outside diameter 34 3/4"

Length of plain part {top, bottom} Thickness of plates {crown 3/8", bottom} Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 151

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 15/16" Pitch of stays 15" x 17 1/2"

How are stays secured W.N. Working pressure by Rules 151

Tube plates: Material {front steel, back} Tensile strength {26-30 tons} Thickness {2 1/32", 1/16"}

Mean pitch of stay tubes in nests 9.405" Pitch across wide water spaces 13 1/2" Working pressure {front 154, back 190}

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

at centre 2 @ 1 1/8" x 1/8" Length as per Rule 30.72" Distance apart 10" No. and pitch of stays

in each 2 @ 9 3/4" Working pressure by Rules 164 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 2 1/32", Back 1 9/32", Top 2 1/32", Bottom 3/4"

Pitch of stays to ditto: Sides 10 1/4" x 10", Back 9 1/2" x 8 3/8", Top 10 1/4" x 10" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 150 Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 2 1/32" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 1/16"

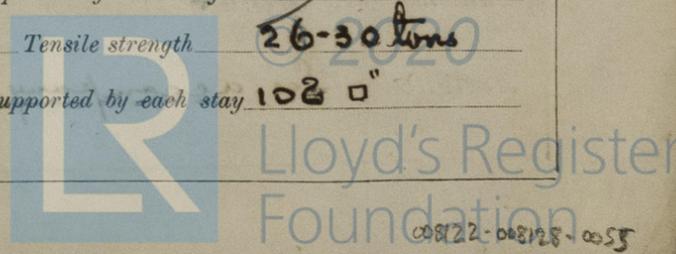
Pitch of stays at wide water space 13 1/2" x 8 3/8" Are stays fitted with nuts or riveted over nuts

Working Pressure 150 Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, Over threads} 2 1/4" No. of threads per inch 9 1/16 Area supported by each stay 258 sq"

Working pressure by Rules 165 Screw stays: Material steel Tensile strength 26-30 tons

Diameter {At turned off part, Over threads} 1 9/8" No. of threads per inch 9 Area supported by each stay 108 sq"



Working pressure by Rules 150  drilled at the outer ends  Margin stays: Diameter { At turned off part, 1 3/4" or Over threads }  
 No. of threads per inch 9 supported by each stay 96 0" Working pressure by Rules 189  
 Tubes: Material Iron at { Stay 2 1/2" Thickness { 9 w.g. 5/16" No. of threads per inch 9 }  
 Pitch of tubes 3 3/4 x 3 3/8 Working pressure by Rules 230 Manhole compensation: Size of opening in shell plate 15 1/4 x 19 1/4 Section of compensating ring 7 1/4 x 27/32 No. of rivets and diameter of rivet holes 36 @ 1 1/16  
 Outer row rivet pitch at ends 6 3/4" Depth of flange if manhole flanged 3" Steam Dome: Material none  
 Tensile strength Thickness of shell Description of longitudinal joint  
 Diameter of rivet holes 8 5 Pitch of rivets Percentage of strength of joint { Plate Rivets }  
 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 none Manufacturers of { Tubes Steel castings }  
 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 casing 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  yes  
 The foregoing is a correct description,  
 For David Rowan & Co. Ltd. Manufacturer.  
 Arch. W. Grierson

Dates of Survey { During progress of work in shops - - } See accompanying machinery report Are the approved plans of boiler and superheater forwarded herewith  yes (If not state date of approval)  
 while building { During erection on board vessel - - } Total No. of visits 6 8

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
 The materials and workmanship are good.  
 The boilers have been constructed under special survey in accordance with the Rules, satisfactorily fitted in the vessel and their safety valves adjusted under steam.

A.L.  
19/8/30.

Survey Fee ... £ 22 : 2 : When applied for, 19 AUG 1930  
 Travelling Expenses (if any) £ : : When received, 22/8/30

L. J. Davis  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 AUG 1930

Assigned See accompanying machy report

