

REPORT ON BOILERS.

No. 20414.

Received at London Office

MAR 22 1939

Date of writing Report 5. 1. 1939 When handed in at Local Office 18-3-1939 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 11th April 1938 Last Survey 17-3-1939

Reg. Book. M/S "Karo" (Number of Visits ✓) Tons Gross Net

on the Glasgow

Master Glasgow Built at Glasgow By whom built Blythwood Stacks Yard No. 53 When built 1939

Engines made at Glasgow By whom made John & Macaulay Engine No. 1120 When made 1939

Boilers made at ditto By whom made ditto Boiler No. 1120 When made 1939

Nominal Horse Power 12.5 Owners Western Oil Shipping Co. Ltd Port belonging to London

MULTITUBULAR BOILERS ~~MAIN~~, AUXILIARY, ~~OR DONKEY~~.

Manufacturers of Steel Colville & Steel Co of Scotland (Letter for Record S)

Total Heating Surface of Boilers 3302 # Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers 2 Single Ended Working Pressure 180 lb

Tested by hydraulic pressure to 320 Date of test 5-10-38 No. of Certificate 2166 Can each boiler be worked separately yes

Area of Firegrate in each Boiler Oil Fired No. and Description of safety valves to each boiler 2 Colclough's Improved High Lift

Area of each set of valves per boiler per Rule 5.3 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 Well clear Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Fitted in tank deck - aft end of E.R. Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 12-6 Length 11-0 Shell plates: Material S Tensile strength 29.33

Thickness 11/32" Are the shell plates welded or flanged ✓ Description of riveting: circ. seams end DR inter. 3"003"

long. seams TR-DBS Diameter of rivet holes in circ. seams 11/16" Pitch of rivets 7"

Percentage of strength of circ. end seams plate 64.6 Percentage of strength of circ. intermediate seam plate 85.3

Percentage of strength of longitudinal joint rivets 86 Working pressure of shell by Rules 183

Thickness of butt straps outer 13/16" inner 15/16" No. and Description of Furnaces in each Boiler 2 Deighton

Material S Tensile strength 26.30 Smallest outside diameter 3-9 1/8"

Length of plain part top bottom ✓ Thickness of plates crown 9/16" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 181

End plates in steam space: Material S Tensile strength 26.30 Thickness 11/8" Pitch of stays 19" 16 1/2"

How are stays secured D. Nuts Working pressure by Rules 185

Tube plates: Material S Tensile strength 26.30 Thickness 15/16" 11/16"

Mean pitch of stay tubes in nests 9 1/2" Pitch across wide water spaces 13 1/2" Working pressure front 184 back 185

Girders to combustion chamber tops: Material S Tensile strength 29.33 Depth and thickness of girder at centre 9" 3/4 (2) Length as per Rule 2-9 5/8 Distance apart 8 1/2" No. and pitch of stays 5 at 4 3/4"

Tensile strength 26.30 Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 7/8"

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

Working pressure by Rules 190 Front plate at bottom: Material S Tensile strength 26.30

Thickness 15/16" Lower back plate: Material S Tensile strength 26.30 Thickness 13/16"

Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over Nuts

Working Pressure 214 Main stays: Material S Tensile strength 28.32

Diameter At body of stay, 2 3/4" No. of threads per inch 6 Area supported by each stay 213.50

Working pressure by Rules 208 Screw stays: Material S Tensile strength 26.30

Diameter At turned off part, 1 3/8" No. of threads per inch 9 Area supported by each stay 53.10

Working pressure by Rules 180 Are the stays drilled at the outer ends No Margin stays: Diameter 1 5/8" At turned off part. ✓
 No. of threads per inch 9 Area supported by each stay 44.5" Working pressure by Rules 193
 Tubes: Material S External diameter 2 1/2" Thickness 11/32 + 5/16" No. of threads per inch 9
 Pitch of tubes 3 7/8 x 3 3/4" Working pressure by Rules 183 Manhole compensation: Size of opening in
 shell plate 20 1/2 x 16 1/2" Section of compensating ring 2-10 1/2 + 2-6 1/2 + 1 1/8" No. of rivets and diameter of rivet holes 36 at 1 1/4"
 Outer row rivet pitch at ends 8 3/16" 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
 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 forgings and castings and after assembly in place Are drain cocks of
 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

The foregoing is a correct description,
 For JOHN G. KENCAID & CO. LIMITED.
 Director.

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

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

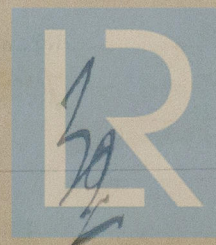
GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers have been built under special survey in accordance with the Rules & the approved plan. Materials & workmanship are good: they have been properly fitted in the vessel, examined under steam & safety valves adjusted as above. This Report accompanies that on the Machinery.

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

For W. G. Parnell & Self
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 21 MAR 1939

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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