

REPORT ON BOILERS.

No. 23305.

Received at London Office

8 MAY 1946

Date of writing Report 23rd APRIL 1946 When handed in at Local Office 27th APRIL 1946 Port of Greenock.No. in Reg. Book. Survey held at Greenock Date, First Survey 9th Aug. 1945. Last Survey 26th April 1946

on the "Empire Lola" Single Sc. tug

(Number of Visits ✓) Gross 294.62 Tons Net ✓

Built at Greenock By whom built George Brown & Co (Marine) Ltd. Yard No. 236 When built 1946

Engines made at Greenock By whom made Rankin & Blackmore Engine No. 516 When made 1946

Boilers made at Greenock By whom made Rankin & Blackmore Boiler No. 516 When made 1946

Nominal Horse Power 155 Owners Ministry of War Transport Port belonging to Greenock

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd. Glasgow

(Letter for Record S ✓)

Total Heating Surface of Boilers 2400 sq ft ✓

Is forced draught fitted Yes ✓

Coal or Oil fired Oil ✓

No. and Description of Boilers One ✓

Working Pressure 200 lbs sq ✓

Tested by hydraulic pressure to 350 lbs. Date of test 10-1-46 No. of Certificate 2412 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 Cockburns Improved high lift. 2 1/4"

Area of each set of valves per boiler {per Rule 2.125" 6.97 sq ft as fitted 2 1/4" 7.95 sq ft} Pressure to which they are adjusted 200 lbs sq 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 4' 0"

Is oil fuel carried in the double bottom under boilers No ✓

Smallest distance between shell of boiler and tank top plating ✓

Is the bottom of the boiler insulated No ✓

Largest internal dia. of boilers 14' 9 3/8" Length 11' 0" Shell plates: Material Steel ✓ Tensile strength 29.33 Tons ✓

Thickness 1 5/16" Are the shell plates welded or flanged No. ✓ Description of riveting: circ. seams {end D.R. L.A.P. ✓ inter. ✓}

long. seams T. R. D. BUTT STRAPS. Diameter of rivet holes in {circ. seams 1 5/16" ✓ long. seams 1 5/16" ✓} Pitch of rivets {3 3/4" ✓ 8 1/2" ✓}

Percentage of strength of circ. end seams {plate 64.9. ✓ rivets 43.56. ✓} Percentage of strength of circ. intermediate seam {plate ✓ rivets ✓}

Percentage of strength of longitudinal joint {plate 84.5. ✓ rivets 90.1. ✓ combined 87.0. ✓}

Thickness of butt straps {outer 1" ✓ inner 1 1/8" ✓}

No. and Description of Furnaces in each Boiler 3 Deighton corrugated section ✓

Material Steel ✓ Tensile strength 26/30 Tons ✓ Smallest outside diameter ✓ 43 1/4" ✓

Length of plain part {top ✓ bottom ✓} Thickness of plates {crown 5/8" ✓ bottom 5/8" ✓} Description of longitudinal joint welded ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓

End plates in steam space: Material Steel ✓ Tensile strength 26/30 Tons ✓ Thickness 1 1/4" ✓ Pitch of stays 20" x 18" ✓

How are stays secured Double nuts & washers.

Tube plates: Material {front ✓ back ✓} Steel Tensile strength {26/30 Tons ✓}

Thickness {1 5/16" ✓ 7/8" ✓}

Mean pitch of stay tubes in nests 8" x 7 3/8" Pitch across wide water spaces 13 1/2" ✓

Girders to combustion chamber tops: Material Steel ✓ Tensile strength 26/30 Tons ✓ Depth and thickness of girder

at centre 9 1/4" x 1 3/4" Length as per Rule 2' 10" ✓ Distance apart 10" ✓ No. and pitch of stays

in each 3 - 1 3/4" - 8" pitch ✓ Combustion chamber plates: Material Steel ✓

Tensile strength 26/30 Tons ✓ Thickness: Sides 23/32" Back 11/16" Top 23/32" Bottom 23/32" ✓

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

Front plate at bottom: Material Steel ✓ Tensile strength 26/30 Tons ✓

Thickness 1 5/16" ✓ Lower back plate: Material Steel ✓ Tensile strength 26/30 Tons ✓ Thickness 7/8" ✓

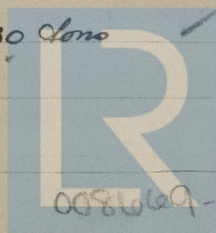
Pitch of stays at wide water space 13 1/2" ✓ Are stays fitted with nuts or riveted over nuts. ✓

Main stays: Material Steel ✓ Tensile strength 26/30 Tons ✓

Diameter {At body of stay, 3 1/4" ✓ or Over threads " ✓} No. of threads per inch 6 ✓

Screw stays: Material Steel ✓ Tensile strength 26/30 Tons ✓

Diameter {At turned off part, 1 3/4" ✓ or Over threads " ✓} No. of threads per inch 9 ✓



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Are the stays drilled at the outer ends No ✓
Margin stays: Diameter { At turned off part, 1 7/8" ✓
or Over threads " " ✓
No. of threads per inch 9 ✓
Tubes: Material Steel ✓ External diameter { Plain 2 1/2" ✓
Stay " " Thickness { 9 W.G. ✓
5/16" 3/8" 7/16" No. of threads per inch 9 ✓
Pitch of tubes 4" x 3 1/16" ✓ Manhole compensation: Size of opening in
shell plate 16" x 12" ✓ Section of compensating ring 2' 10" x 2' 3" x 1 5/16" ✓ No. of rivets and diameter of rivet holes 28 - 1 5/16" ✓
Outer row rivet pitch at ends 8 1/2" ✓ Depth of flange if manhole flanged ✓ Steam Dome: Material None ✓
Tensile strength ✓ Thickness of shell ✓ Description of longitudinal joint ✓
Diameter of rivet holes ✓ Pitch of rivets ✓ Percentage of strength of joint { Plate ✓
Rivets ✓
Internal diameter ✓ Thickness of crown ✓ No. and diameter of
stays ✓ Inner radius of crown ✓
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 forgings ✓
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 easing gear ✓
Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure:
tubes ✓ forgings and 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

The foregoing is a correct description,
FRANKIN & BLACKMORE LTD.
James Blackmore Manufacturer.
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 yes.
(If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case yes.

If so, state Vessel's name and Report No.

"Empire Lueda"

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The boiler has been built under Special Survey in accordance with the Rules, & approved plans. The materials & workmanship are good. The boiler has been securely fitted on board the vessel, & the safety valves adjusted under steam to the pressure of 200 lbs.

Survey Fee £ : : }

When applied for, 19

Travelling Expenses (if any) £ : : }

When received, 19

Committee's Minute

Assigned

For O. F. Treckmann - M. Caldwell - Self.
Engineer Surveyor to Lloyd's Register of Shipping.

E. E. Evanshaw



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