

REPORT ON BOILERS.

No. 23608

Received at London Office. 4 - FEB 1948

Date of writing Report. 24th JAN. 1948. When handed in at Local Office. 28th JAN. 1948. Port of GREENOCKNo. in Reg. Book. Survey held at GREENOCK Date, First Survey 8th MAY 1946 Last Survey 23-1-48 19

on the T.W.S.S. "ARGUS" (Number of Visits. 13.) Gross. 1917.97 Tons Net. 670.70

Master Built at PORT GLASGOW By whom built. FERGUSON Bros (P/Ls) Yard No. 351 When built 1945

Engines made at PORT GLASGOW By whom made. FERGUSON Bros. Engine No. 351 When made 1945

Boilers made at GREENOCK By whom made. JOHN G. KINCAID & CO L^{td} Boiler No. 316 When made 1945

Nominal Horse Power 326 Owners CORPORATION OF TRINITY HOUSE Port belonging to LONDON

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel. COLVILLE L^{td} (Letter for Record. S)Total Heating Surface of Boilers 5336^{ft} Is forced draught fitted. YES Coal or Oil fired. Oil

No. and Description of Boilers Two Single ended return tube Working Pressure 220 lb./sq. in.

Tested by hydraulic pressure to 380 Date of test 18-9-46 No. of Certificate 2438 Can each boiler be worked separately. YES

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler. One double spring 144 2 1/2 in.

Area of each set of valves per boiler per Rule 7.09^{sq} as fitted 7.96^{sq} Pressure to which they are adjusted 225 Are they fitted with easing gear. YES

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler. YES

Smallest distance between boilers or uptakes and bunkers or woodwork 7-9" Is oil fuel carried in the double bottom under boilers. NO

Smallest distance between shell of boiler and tank/top plating. Open floor Is the bottom of the boiler insulated. YES

Largest internal dia. of boilers 14-9 1/8" Length 11-5 3/32" Shell plates: Material S Tensile strength 29 3/32 tons

Thickness 1 1/16" Are the shell plates welded or flanged. NO Description of riveting: circ. seams end DR inter. YES

Long. seams TRDAS Diameter of rivet holes in circ. seams 1 1/16" long. seams 1 1/16" Pitch of rivets 4" 9-68 7/8"

Percentage of strength of circ. end seams plate 64.1 rivets 44.9 Percentage of strength of circ. intermediate seam plate 85.1 rivets 86.6

Percentage of strength of longitudinal joint rivets 87.74 Working pressure of shell by Rules 223 lb./sq. in.

Thickness of butt straps outer 1 1/8" inner 1 1/4" No. and Description of Furnaces in each Boiler Three Dighton corrugated

Material S Tensile strength 24/30 tons Smallest outside diameter 3-6 9/16"

Length of plain part top bottom Thickness of plates crown 2 1/16" bottom 2 1/32" Description of longitudinal joint Weld

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

End plates in steam space: Material S Tensile strength 24/30 tons Thickness 1 1/32" Pitch of stays 21 x 20"

How are stays secured. DR Working pressure by Rules 29 3/32"

Tube plates: Material front S back S Tensile strength 24/30 tons Thickness 29 3/32"

Mean pitch of stay tubes in nests 8.971" Pitch across wide water spaces 1-1 5/8" Working pressure front back

Girders to combustion chamber tops: Material S Tensile strength 29 3/32 tons Depth and thickness of girder

at centre 8 1/2" x 1 7/8" x 15" x 2 Length as per Rule 2-7 1/2" Distance apart 10 3/8" No. and pitch of stays

in each Two 2 9 3/8" Working pressure by Rules Combustion chamber plates: Material S

Tensile strength 24/30 tons Thickness: Sides 13/16" Back 25/32" Top 13/16" Bottom 13/16"

Pitch of stays to ditto: Sides 10 5/8" x 9 7/8" Back 9 7/8" x 9 7/8" Top 9 7/8" x 10 3/8" Are stays fitted with nuts or riveted over. Nuts inside

Working pressure by Rules Front plate at bottom: Material S Tensile strength 24/30 tons

Thickness 29 3/32" Lower back plate: Material S Tensile strength 24/30 tons Thickness 29 3/32"

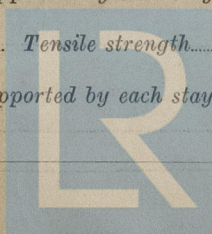
Pitch of stays at wide water space 14 x 9 7/8" Are stays fitted with nuts or riveted over. Nuts both ends

Working pressure Main stays: Material S Tensile strength 28 3/32 tons

Diameter At body of stay 3 1/4" No. of threads per inch 6 Area supported by each stay 24/30 tons

Working pressure by Rules Screw stays: Material S Tensile strength 24/30 tons

Diameter At turned off part 2" No. of threads per inch 9 Area supported by each stay



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Working pressure by Rules..... Are the stays drilled at the outer ends..... No. ✓ Margin stays: Diameter { At turned off part, ✓ 2 1/8" or Over threads.....
No. of threads per inch 9 ✓ Area supported by each stay..... Working pressure by Rules.....
Tubes: Material *Hot rolled steel* ✓ External diameter { Plain..... 2 3/4" ✓ Stay..... 2 3/4" Thickness { 3/8" 3/16" 1/4" ✓ No. of threads per inch 9 ✓
Pitch of tubes..... 3 7/8" x 3 7/8" ✓ Working pressure by Rules..... Manhole compensation: Size of opening in
shell plate 16 1/2" x 20 1/2" ✓ Section of compensating ring 2' 8 1/2" x 3' 1" x 1 1/2" No. of rivets and diameter of rivet holes 42 ✓ 1 1/2"
Outer row rivet pitch at ends 10" ✓ Depth of flange if manhole flanged *McNeil type door* ✓ Steam Dome: Material.....
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..... 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..... 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..... 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 on
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 *J. Kincaid & Co. Limited* Manufacturer

Dates of Survey while building { During progress of work in shops - - (1946) MAY 8-28 JUNE 4-27 JULY 24-29 31. Are the approved plans of boiler and superheater forwarded herewith *yes* (If not state date of approval.)
During erection on board vessel - - - AUG. 12-19-23 SEPT. 10-17-18 (1947)
Total No. of visits 15

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 constructed under Special Survey in accordance with the Rules & approved plans. The materials and workmanship are sound & good. They have been efficiently installed in the vessel & their safety valves adjusted under steam to a safe working pressure 225 lbs/sq. in. For recommendations please see Greenock report N°

Survey Fee £ 52 : 2 : } When applied for, 29 JANUARY 1948.
Travelling Expenses (if any) £ : : } When received 19.....

Charles J. Hunter
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... GLASGOW 23 FEB 1948
Assigned..... THE ACCOMPANYING MACHINERY REPORT



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