

REPORT ON BOILERS.

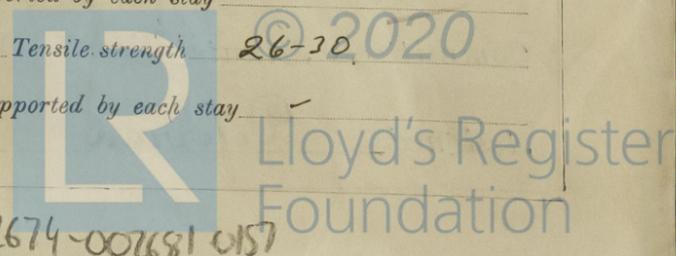
No. 65101
13 MAY 1942

Received at London Office 19 FEB 1942

Date of writing Report 10 When handed in at Local Office 16.2.42 Port of Glasgow
 No. in Reg. Book. 10 Survey held at Glasgow Date, First Survey 7.1.42 Last Survey 30.1.42
 on the "EMPIRE AUSTEN" (Number of Visits 6) Tons {Gross 7057.29
 Net 4991.26
 Master _____ Built at PORT GLASGOW By whom built LITHGOWS LIMITED Yard No. 969 When built 1942
 Engines made at GREENOCK By whom made JOHN G. KINCAID & G. LTD. Engine No. 432 When made 1942
 Boilers made at Glasgow By whom made John Thompson (Marine Boilers) Ltd Boiler No. 5173 When made 1942
 Nominal Horse Power _____ Owners MINISTER OF WAR TRANSPORT Port belonging to GREENOCK

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Cotnam's Ltd (Letter for Record 5)
 Total Heating Surface of Boilers 1786 Is forced draught fitted _____ Coal or Oil fired _____
 No. and Description of Boilers 1- Single ended Multitubular Working Pressure 220
 Tested by hydraulic pressure to 380 Date of test 30-1-42 No. of Certificate 20964 Can each boiler be worked separately _____
 Area of Firegrate in each Boiler 45 ft² No. and Description of safety valves to each boiler 2" High Lift Double Spring
 Area of each set of valves per boiler {per Rule 4.74 as fitted 6.28 Pressure to which they are adjusted _____ Are they fitted with easing gear _____
 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 _____ Is oil fuel carried in the double bottom under boilers _____
 Smallest distance between shell of boiler and tank top plating _____ Is the bottom of the boiler insulated _____
 Largest internal dia. of boilers 12'9 1/2" Length 11'6" Shell plates: Material Steel Tensile strength 29-33
 Thickness 1 1/4" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end DR L.P. inter. _____
 long. seams TRDB'S Diameter of rivet holes in {circ. seams 1 5/16" Pitch of rivets {inter. 3-79" long. seams 1 5/16" _____
 Percentage of strength of circ. end seams {plate 65.3 rivets 45.2 Percentage of strength of circ. intermediate seam {plate _____ rivets _____
 Percentage of strength of longitudinal joint {plate 85.6 rivets 87.8 Working pressure of shell by Rules 221 combined 89.7
 Thickness of butt straps {outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 Leighton
 Material Steel Tensile strength 26-30 Smallest outside diameter 3'1 1/4"
 Length of plain part {top _____ bottom _____ Thickness of plates {crown 1 1/32" Description of longitudinal joint Welded bottom _____
 Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules _____
 End plates in steam space: Material Steel Tensile strength 26-30 Thickness 1 3/32" Pitch of stays 19 x 16"
 How are stays secured Double nuts Working pressure by Rules _____
 Tube plates: Material {front steel back _____ Tensile strength {_____ Thickness {_____ 15/16" 25/32"
 Mean pitch of stay tubes in nests 9 1/2" Pitch across wide water spaces 14" Working pressure {front _____ back _____
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 Depth and thickness of girder _____
 at centre 2 @ 8 1/2" x 5/8" Length as per Rule 2' 7 1/2" Distance apart 6" + 7" No. and pitch of stays _____
 in each 2-10" Working pressure by Rules _____ Combustion chamber plates: Material Steel
 Tensile strength 26-30 Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 3/4"
 Pitch of stays to ditto: Sides 7 x 10" Back 8 x 9 1/4" Top 10 x 7" Are stays fitted with nuts or riveted over Yes
 Working pressure by Rules _____ Front plate at bottom: Material Steel Tensile strength 26-30
 Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26-30 Thickness 27/32"
 Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over Yes
 Working Pressure _____ Main stays: Material Steel Tensile strength 28-32
 Diameter {At body of stay, 2 7/8" or _____ No. of threads per inch 6 Area supported by each stay _____
 Over threads 3 1/4" Working pressure by Rules _____ Screw stays: Material Steel Tensile strength 26-30
 Diameter {At turned off part, _____ or _____ No. of threads per inch 9 Area supported by each stay _____
 Over threads 1 1/4"



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Working pressure by Rules Are the stays drilled at the outer ends Margin stays: Diameter ^{At turned off part,} _{or Over threads} 2" - 1 7/8"

No. of threads per inch 9 Area supported by each stay Working pressure by Rules

Tubes: Material SD Steel External diameter ^{Plain} 3" _{Stay} 3" Thickness ^{8 wg.} 3/8" - 5/16" No. of threads per inch 9

Pitch of tubes 4 1/2" - 4 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 (1 1/4" x 12) 2. No. of rivets and diameter of rivet holes 40 - 1 5/16"

Outer row rivet pitch at ends 9 1/8" Depth of flange if manhole flanged 3 7/8" 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 casing 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 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,

R. McArthur FOR MESSRS JOHN THOMPSON (MARINE BOILERS) LTD Manufacturer.

Dates of Survey ^{During progress of work in shops - -} 1942 Jan: 7. 9. 13. 23. 27. 30 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

^{while building} _{board vessel - - -} Total No. of visits 6

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. Empire Rhodes 64840.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under Special Survey in accordance with the Society's Rules, the approved plan and Specification. The material and workmanship are good. The boiler is intended for Messrs Lillies Ltd. 969. (Engines by J.G. Kinnaird)

Esb
16/2/42

Survey Fee £ 11 : 18 : : } When applied for, 19

Spec Travelling Expenses (if any) £ 2 : 19 : 6 } When received, 19

17 FEB 1942

J.R. Dale

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 17 FEB 1942

Assigned *Deferred*



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