

REPORT ON BOILERS.

No. 19929

Received at London Office

20 MAR 1935

Date of writing Report 7 3 1935 When handed in at Local Office 16th MARCH 1935 Port of Greenock

No. in Reg. Book 101 Survey held at Greenock Date, First Survey 23rd MARCH 1935 Last Survey 15th MARCH 1935
on the M/S "Triaster" (Number of Visits ✓) Gross 6032.29 Tons Net 3563.69

Built at Greenock By whom built Lithgow & Co^l Yard No. 842 When built 1935
Engines made at Greenock By whom made John E. McLeod & Co^l Engine No. 1180 When made 1935
Boilers made at ditto By whom made ditto Boiler No. 1180 When made 1935
Owners British Phosphate Commissioners Port belonging to London

VERTICAL DONKEY BOILER.

Made at Greenock By whom made John E. McLeod & Co^l Boiler No. 1180 When made 1935 Where fixed Engine Room
Manufacturers of Steel Balvill & Co^l

Total Heating Surface of Boiler 375^{sq} Is forced draught fitted No Coal or Oil fired Oil

No. and Description of Boilers one vertical water heat Working pressure 100

Tested by hydraulic pressure to 200 Date of test 31-12-34 No. of Certificate 2037

Area of Firegrate in each Boiler oil fuel No. and Description of safety valves to each boiler double spring

Area of each set of valves per boiler per rule 4.08 sq Pressure to which they are adjusted 100 Are they fitted with easing gear yes
as fitted 4.8 sq

State whether steam from main boilers can enter the donkey boiler ✓ Smallest distance between boiler Butthead

5" Is oil fuel carried in the double bottom under boiler yes Smallest distance between base of boiler and tank top plating

2'-1" Is the base of the boiler insulated yes Largest internal dia. of boiler 4'-6" Height 15'-5"

Shell plates: Material S Tensile strength 28-32 Thickness 1/2"

Are the shell plates welded or flanged No Description of riveting: circ. seams end STR Lap long. seams STR Lap

Dia. of rivet holes in 7/8" Pitch of rivets 1.902 Percentage of strength of circ. seams plate 53.9 of Longitudinal joint rivets 48.08
7/8" 17/8" 47.4 combined ✓

Working pressure of shell by rules 105 Thickness of butt straps outer ✓ inner ✓

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat hemisphere Material S

Tensile strength 26-30 Thickness 5/8" Radius 3'-7 1/2" Working pressure by rules 110

Description of Furnace: Plain, spherical, or dished crown end Material S Tensile strength 26-30

Thickness 5/8" over External diameter 4'-0 1/2" Length as per rule 2'-6 5/8" Working pressure by rules 120
1/2 shell

Pitch of support stays circumferentially ✓ and vertically ✓ Are stays fitted with nuts or riveted over ✓

Diameter of stays over thread ✓ Radius of spherical or dished furnace crown 3'-6" Working pressure by rule 120

Thickness of Ogee Ring ✓ Diameter as per rule D Working pressure by rule ✓

Combustion Chamber: Material ✓ Tensile strength ✓ Thickness of top plate ✓

Radius if dished ✓ Working pressure by rule ✓ Thickness of back plate ✓ Diameter if circular ✓

Length as per rule ✓ Pitch of stays ✓ Are stays fitted with nuts or riveted over ✓

Diameter of stays over thread ✓ Working pressure of back plate by rules ✓

Tube Plates: Material Top S Tensile strength 26.30 Thickness Top 3/4" Mean pitch of stay tubes in nests 9.625
Bottom S

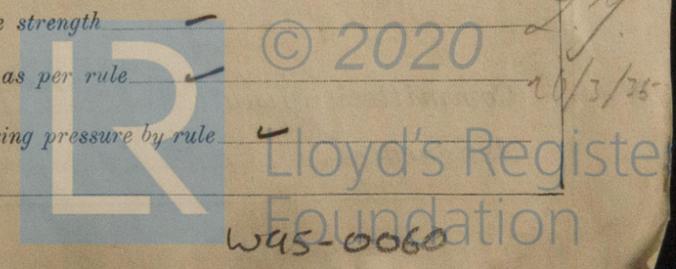
If comprising shell, Dia. as per rule front Pitch in outer vertical rows ✓ Dia. of tube holes Top 1 1/2" Bottom 1 1/2"
back stay plain stay plain

Is each alternate tube in outer vertical rows a stay tube yes Working pressure by rules front Top 115
back Bottom

Girders to combustion chamber tops: Material ✓ Tensile strength ✓

Depth and thickness of girder at centre ✓ Length as per rule ✓

Distance apart ✓ No. and pitch of stays in each ✓ Working pressure by rule ✓



W45-0060

Crown stays: Material Tensile strength Diameter at body of stay, or over threads
 No. of threads per inch Area supported by each stay Working pressure by rules
Screw stays: Material Tensile strength Diameter at turned off part, or over threads No. of threads per inch
 Area supported by each stay Working pressure by rules Are the stays drilled at the outer ends
Tubes: Material SD steel External diameter $\left\{ \begin{array}{l} \text{plain} \\ \text{stay} \end{array} \right\} \frac{1}{2}''$ Thickness $\left\{ \begin{array}{l} 12 \text{ WG} \\ 9/32'' \end{array} \right\}$
 No. of threads per inch 9 Pitch of tubes 2 3/4" - 2 3/4" Working pressure by rules 137
Manhole Compensation: Size of opening in shell plate 14 1/2" x 18 1/2" Section of compensating ring 2 3/2" - 1 1/2" - 5/8" No. of rivets and diameter
 of rivet holes 40 at - 1 3/16" in plan Outer row rivet pitch at ends 3 3/4" Depth of flange if manhole flanged 3
Uptake: External diameter Thickness of uptake plate
Cross Tubes: No. External diameters Thickness of plates

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,
 For JOHN G. KINCAID & CO. LIMITED.
J. G. Kincaid Director. Manufacturer.

Dates of Survey During progress of work in shops - -
 while building During erection on board vessel - -
 Is the approved plan of boiler forwarded herewith (If not state date of approval.) yes
 Total No. of visits 1
 SEE MACHINERY REPORT.

Is this Boiler a duplicate of a previous case 910 If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler was built under special survey in accordance with the approved plan & the workmanship & material are of good quality. It is now securely fitted on board.
This Report accompanies that of the Machinery

Survey Fee ... £ 40 : When applied for, 19...
 Travelling Expenses (if any) £ 10 : When received, 19...
Charged on Machinery Rpt.

W. G. Gordon-Maclean
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 MAR 1935
 Assigned See accompanying Mach. Report.

