

REPORT ON BOILERS.

No. 19324

Received at London Office [3 JUN 1931

Date of writing Report 29. 8 1931 When handed in at Local Office 28th May 1931. Port of Greenock

No. in Reg. Book. Greenock Date, First Survey 15th July 1930. Last Survey 24th May 1931. on the s/s "British Energy" (Number of Visits) Gross 4208.54 Tons Net 4194.10.

Master Built at Greenock By whom built Greenock Dockyard & Co. Ltd. No. 422 When built 1931
Engines made at Greenock By whom made John McNeild & Co. Engine No. 1767 When made 1931
Boilers made at ditto By whom made ditto Boiler No. 1767 When made 1931
Nominal Horse Power Owners British Tankers Ltd. Port belonging to London

MULTITUBULAR BOILERS - MAIN, AUXILIARY, ~~SMOKE~~

Manufacturers of Steel Melkoytner Bergbau Industrie, Stahl C^o of Scotland. (Letter for Record S)

Total Heating Surface of Boilers 22477 Is forced draught fitted Yes Oil fired Oil
No. and Description of Boilers one Single End
Working Pressure 150

Tested by hydraulic pressure to 245 Date of test 19.2.31 No. of Certificate 2005 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler Oil Fuel No. and Description of safety valves to each boiler Bockhorns (Double High Lift)
Area of each set of valves per boiler per Rule 13.6120 as fitted 14.137 Pressure to which they are adjusted 155 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 1-6 Is oil fuel carried in the double bottom under boilers 910

Smallest distance between shell of boiler and tank top plating 1-6 Is the bottom of the boiler insulated Yes
Largest internal dia. of boilers 12. 11 1/8" Length 11-6 Shell plates: Material S Tensile strength 29.33

Thickness 7/8" Are the shell plates welded or flanged - Description of riveting: circ. seams end inter. 2.853
long. seams TR.D.B.S. Diameter of rivet holes in circ. seams 15/16 7/8 Pitch of rivets 6 3/4

Percentage of strength of circ. end seams plate 67.4 rivets 43.4 Percentage of strength of circ. intermediate seam plate 86.1 rivets 86.6
Percentage of strength of longitudinal joint plate 86.1 rivets 86.6 combined 89.42 Working pressure of shell by Rules 152

Thickness of butt straps outer 21/32 inner 25/32 No. and Description of Furnaces in each Boiler 2 Deighton
Material S Tensile strength 26.30 Smallest outside diameter 3' 2 7/8"

Length of plain part top bottom Thickness of plates crown 7/16 bottom Description of longitudinal joint weld
Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 161

End plates in steam space: Material S Tensile strength 26.30 Thickness 1 1/16" Pitch of stays 20" + 16 1/2"
How are stays secured D.N. Washers Working pressure by Rules 155

Tube plates: Material front back S Tensile strength 26.30 Thickness 1 1/16" Working pressure by Rules 173 front 167 back
Mean pitch of stay tubes in nests 10 Pitch across wide water spaces 13 3/4"

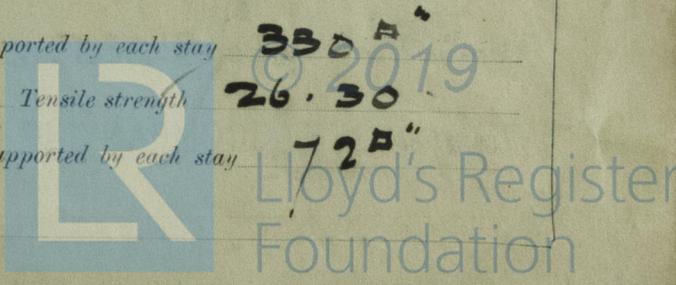
Girders to combustion chamber tops: Material S Tensile strength 29.33 Depth and thickness of girder at centre 8 + 3/4 (2) Length as per Rule 2. 6.58 Distance apart 9 3/4" No. and pitch of stays 3 at 7 1/4" Working pressure by Rules 170

Tensile strength 26.30 Thickness: Sides 1 1/16" Back 3/4" Top 1 1/16" Bottom 1 1/16" Combustion chamber plates: Material S
Pitch of stays to ditto: Sides 9 1/4 + 7 1/4" Back 9 + 8" Top 4 1/4 + 9 3/4" Are stays fitted with nuts or riveted over Rivetted

Working pressure by Rules 160 Front plate at bottom: Material S Tensile strength 26.30 Thickness 29/32" Lower back plate: Material S Tensile strength 26.30 Thickness 29/32" Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over Rivetted Nuts

Working Pressure 156 Main stays: Material S Tensile strength 28.32
Diameter At body of stay, or Over threads 2 1/8" No. of threads per inch 6 Area supported by each stay 330 sq. in.

Working pressure by Rules 150 Screw stays: Material S Tensile strength 26.30
Diameter At turned off part, or Over threads 1 1/2" No. of threads per inch 9 Area supported by each stay 72 sq. in.



Working pressure by Rules **174** Are the stays drilled at the outer ends **910** Margin stays: Diameter **1 3/4"** (At turned off part or Over threads)

No. of threads per inch **9** Area supported by each stay **110 sq"** Working pressure by Rules **164**

Tubes: Material **9100** External diameter: (Plain) **2 3/4"** Thickness **10WG** No. of threads per inch **9**

Pitch of tubes **H x 4"** Working pressure by Rules **169** Manhole compensation: Size of opening in shell plate **16 x 20"** Section of compensating ring **2.9 x 2.5 x 1"** No. of rivets and diameter of rivet holes **38 at 1 1/8"**

Outer row rivet pitch at ends **8"** 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 (Plate Rivets)

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays

How connected to shell Inner radius of crown Working pressure by Rules

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 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 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,
For **JOHN G. KINCAID & CO. LIMITED.** Director. Manufacturer.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler forwarded herewith **Yes** (If not state date of approval.)

while building { During erection on board vessel - - } Total No. of visits **✓**

SEE MACHINERY REPORT.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been built under special survey in accordance with the approved plans & the workmanship, material are of good quality, it is now securely fitted on board.**

This Report accompanies that of the Machinery. (Boiler duplicate of T.G.H. British Protege' Lark Repl. No. 19340)

Survey Fee **charged on Machinery Rept.** When applied for, 192

Travelling Expenses (if any) **charged on Machinery Rept.** When received, 192

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

Committee's Minute **GLASGOW 2 - JUN 1931**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**

