

REPORT ON BOILERS.

No. 19303

Received at London Office 11 MAR 1931

Date of writing Report 15.1.31 When handed in at Local Office 6th MARCH, 1931 Port of Greenock

No. in Reg. Book. 1841 Survey held at Greenock Date, First Survey 18th APRIL, 1930 Last Survey 5th MARCH, 1931

on the S/S "British Resource" (Number of Visits ✓) Gross 4208.54 Tons Net 4194.10

Master Built at Greenock By whom built Greenock Dockyard & Co. Ltd. Yard No. 421 When built 1931

Engines made at Greenock By whom made John & Murdoch & Co. Ltd. Engine No. 1763 When made 1931

Boilers made at ditto By whom made ditto Boiler No. 1763 When made 1931

Nominal Horse Power Owners British Tankers Ltd. Port belonging to London

MULTITUBULAR BOILERS ~~MAIN~~ AUXILIARY, ~~STEAM~~

Manufacturers of Steel Wm. & A. R. Bergbau & Eisenbau (Letter for Record S)

Total Heating Surface of Boilers 1389 sq. ft. Is forced draught fitted Yes Oil fired oil Working Pressure 150

No. and Description of Boilers One Single Ended

Tested by hydraulic pressure to 245 Date of test 13.12.30 No. of Certificate 1997 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 8.42 sq. ft. No. and Description of safety valves to each boiler Cockburn (Double) high lift

Area of each set of valves per boiler {per Rule 9.85 as fitted 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 No

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 11.57/32 Length 11-6 Shell plates: Material S Tensile strength 29.33

Thickness 25/32 Are the shell plates welded or flanged Yes Description of riveting: circ. seams {end DR 9.33 inter 3.096

long. seams TRIDBS Diameter of rivet holes in {circ. seams 15/16 long. seams 27/32 Pitch of rivets {plate 6.5/32 rivets

Percentage of strength of circ. end seams {plate 69.6 rivets 45.2

Percentage of strength of longitudinal joint {plate 82.3 rivets 89.7 combined Working pressure of shell by Rules 152

Thickness of butt straps {outer 5/8 inner 3/4 No. and Description of Furnaces in each Boiler 2 Delightous

Material S Tensile strength 26-30 Smallest outside diameter 3-27/8

Length of plain part {top 7/16 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 160

End plates in steam space: Material S Tensile strength 26-30 Thickness 15/16 Pitch of stays 16 3/8 15 1/4

How are stays secured DN Washers Working pressure by Rules 159 29/32

Tube plates: Material S Tensile strength 26-30 Thickness {front 11/16 back 17/16

Mean pitch of stay tubes in nests 10 Pitch across wide water spaces 13 3/4 Working pressure {front 174 back 167

Girders to combustion chamber tops: Material S Tensile strength 29.33 Depth and thickness of girder 10 1/8

at centre 9 + 3/4 (2) Length as per Rule 34 5/8 Distance apart 10 1/8 No. and pitch of stays

in each 3 w. 8 3/4 Working pressure by Rules 164 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 11/16

Pitch of stays to ditto: Sides 8 3/4 + 7 1/2 Back 8 + 8 1/4 Top 10 7/8 + 8 3/4 Are stays fitted with nuts or riveted over Rivets

Working pressure by Rules 166 Front plate at bottom: Material S Tensile strength 26-30 Thickness 7/8

Thickness 29/32 Lower back plate: Material S Tensile strength 26-30 Thickness 7/8

Pitch of stays at wide water space 14 Are stays fitted with nuts or riveted over Rivets

Working Pressure 154 Main stays: Material S Tensile strength 28-32

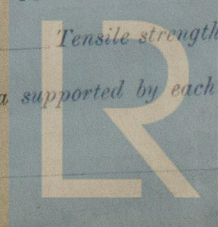
Diameter {At body of stay, 2 3/8 No. of threads per inch 6 Area supported by each stay 249 sq. in.

Over threads 1 5/8 Screw stays: Material S Tensile strength 26-30

Working pressure by Rules 158 No. of threads per inch 9 Area supported by each stay 66 sq. in.

Diameter {At turned off part, 1 3/8

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Working pressure by Rules **153** Are the stays drilled at the outer ends **810** Margin stays: Diameter { At turned off part, **1 5/8** or Over threads **167**

No. of threads per inch **9** Area supported by each stay **90.45 sq. in.** Working pressure by Rules **167**

Tubes: Material **9000** External diameter { Plain **2 3/4"** Stay **2 3/4"** Thickness { **10 W.G.** **5/16" - 1/4"** No. of threads per inch **9**

Pitch of tubes **H x H"** Working pressure by Rules **163** Manhole compensation: Size of opening in shell plate **16" x 20"** Section of compensating ring **2-8 1/2" x 2-4 1/2" x 1 5/16"** No. of rivets and diameter of rivet holes **38 at 1 1/2"**

Outer row rivet pitch at ends **8** Depth of flange if manhole flanged **3 1/4"** Steam Dome: Material

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of 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

Number of elements Material of tubes Manufacturers of { Tubes Steel castings 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 23 inclusive for boilers been complied with **Yes**

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

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 (If not state date of approval.) **Yes**

Total No. of visits **/**

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.**

For Repel accompany with that of the Machinery (Boiler duplicate of 1162 S/S "British Pride" Ent. Rpt. No. 19294)

Survey Fee **Charged on Marlykett** : : When applied for, 192
: : When received, 192

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

Committee's Minute **GLASGOW 10 MAR 1931**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**