

Std. No. 32540

Reg. No. 16466

Rpt. 5a.

REPORT ON BOILERS.

Received at London Office

NOV 12 1938

Date of writing Report 2nd November 1938 When handed in at Local Office 16th November 1938 Port of Edinburgh

No. in Reg. Book. Stockton Date, First Survey 22nd September Last Survey 25th October 1938

on the M.V. "BRITISH GENIUS" (Number of Visits 1) Tons {Gross 8553 Net 4961

Master W. Lees for the Built at Sunderland By whom built W. Lees for the Yard No. 644 When built 1939

Engines made at Sunderland By whom made W. Lees for the Engine No. 644 When made 1939

Boilers made at Stockton By whom made Stockton C.E. & Riley Boiler Co. Ltd Boiler No. 6293 When made 1938

Nominal Horse Power 684 Owners British Tanker Co. Ltd Port belonging to London

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd. (Letter for Record Yes)

Total Heating Surface of Boilers 1523 sq. ft. Is forced draught fitted Yes Coal or Oil fired oil

No. and Description of Boilers 1 SB. Working Pressure 150 lbs.

Tested by hydraulic pressure to 275 Date of test 25.10.38 No. of Certificate 6958 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 11.6 sq. ft. No. and Description of safety valves to each boiler 2 Direct Spring

Area of each set of valves per boiler {per Rule 14.10" as fitted} Pressure to which they are adjusted 150 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 18 in upper mess Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 18 in upper mess Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 4'-4 1/2" Length 4'-6" Shell plates: Material S Tensile strength 29/33

Thickness 27/32" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR inter. ✓ long. seams T.R. DBS. Diameter of rivet holes in {circ. seams 1" long. seams 7/8" Pitch of rivets {3/4" 6/8"

Percentage of strength of circ. end seams {plate 69.2 rivets 48.8 Percentage of strength of circ. intermediate seam {plate 85.7 rivets 93.2 Working pressure of shell by Rules 152 lbs.

Percentage of strength of longitudinal joint {plate 85.7 rivets 93.2 combined} No. and Description of Furnaces in each Boiler 2 CF.

Thickness of butt straps {outer 19/32" inner 23/32" Material S Tensile strength 26.30 Smallest outside diameter 3'-2 1/4"

Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 13/32" bottom 13/32" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 151 lbs.

End plates in steam space: Material S Tensile strength 26-30 Thickness 27/32 Pitch of stays 14 x 15 1/2

How are stays secured D.N & washers Working pressure by Rules 150 lbs.

Tube plates: Material {front S back S Tensile strength {26.30 Thickness {27/32 1/16"

Mean pitch of stay tubes in nests 10 3/8" Pitch across wide water spaces 13 1/2" Working pressure {front 204 lbs back 162 lbs

Girders to combustion chamber tops: Material S Tensile strength 28-32 Depth and thickness of girder

at centre 8" x 1 1/4" Length as per Rule 27 19/32" Distance apart 8" No. and pitch of stays

in each 2 27 1/2" Working pressure by Rules 214 lbs. Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 5/8" Back 23/32" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 9 3/8" x 9" Back 9 x 8" Top 8" x 7 1/2" Are stays fitted with nuts or riveted over nuts except back plate in nest.

Working pressure by Rules 159 lbs. Front plate at bottom: Material S Tensile strength 26/30

Thickness 27/32 Lower back plate: Material S Tensile strength 26-30 Thickness 27/32

Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over nuts

Working Pressure 220 lbs. Main stays: Material S Tensile strength 28-32

Diameter {At body of stay, 2 3/8" or Over threads 2 3/8" No. of threads per inch 6 Area supported by each stay 208 sq. in.

Working pressure by Rules 188 lbs. Screw stays: Material S Tensile strength 26-30

Diameter {At turned off part, 1 1/2" or Over threads 1 1/2" No. of threads per inch 9 Area supported by each stay 84.4 sq. in.

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Working pressure by Rules 165 Are the stays drilled at the outer ends no. Margin stays: Diameter 1 7/8" At turned off part, or Over threads

No. of threads per inch 9 Area supported by each stay 47 0" Working pressure by Rules 157 lbs

Tubes: Material lap welded iron External diameter 2 1/2" Thickness 10 wks No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 209 lbs Manhole compensation: Size of opening in shell plate 20" x 4" Section of compensating ring 9" x 1" No. of rivets and diameter of rivet holes 22 @ 1 1/2"

Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged ✓ 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 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 _____ 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 yes or and on behalf of STOCKTON CHEMICAL ENGINEERS & RILEY BOILERS LTD.

The foregoing is a correct description, How Riley Manufacturer.

DIRECTOR

Dates of Survey while building During progress of work in shops - - - During erection on board vessel - - - Sept. 22. 27 Oct 3. 7. 10. 18. 25. 1938 Are the approved plans of boiler and superheater forwarded herewith 17-6-37

Total No. of visits _____

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.) This boiler has been made under Special Survey in accordance with the approved Plan & the requirements of the Rules.

The materials & workmanship are good & a satisfactory hydraulic test of 275 lbs/sq. in. has been held.

The boiler is to be fitted on board at Sunderland.

This boiler has been securely fixed on board the vessel examined under Steam & safety valves adjusted in accordance with Rule requirements.

In recommendation please see Encl. Rpt. P. J. Kasser

Survey Fee £ 10 : 3 : 0 When applied for, 11th November 1938

Travelling Expenses (if any) £ . . . : . . . : 9 When received, 1.2. 1939

Robert Pitt
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 20 JAN 1939

Assigned See F.E. Mackay rpt.



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Date of writing Report _____

No. in Survey held Reg. Book. _____

on the _____

Master _____

Engines made at _____

Boilers made at _____

Nominal Horse Power _____

MULTITUBULAR

Manufacturers of St _____

Total Heating Surface _____

No. and Description _____

Tested by hydraulic _____

Area of Firegrate in _____

Area of each set of _____

In case of donkey boiler _____

Smallest distance bet _____

Smallest distance bet _____

Largest internal dia _____

Thickness _____

long. seams T.R.

Percentage of strength _____

Percentage of strength _____

Thickness of butt joint _____

Material _____

Length of plain part _____

Dimensions of stiff _____

End plates in steam _____

How are stays secured _____

Tube plates: Material _____

Mean pitch of stay _____

Girders to combustion _____

at centre 7 1/2"

in each 2 @

Tensile strength _____

Pitch of stays to dome _____

Working pressure _____

Thickness _____

Pitch of stays at _____

Working Pressure _____

Diameter At body or Over threads _____

Working pressure _____

Diameter At turned off part or Over threads _____