

REPORT ON BOILERS.

No. 102954

1762.

Received at London Office

4 JUL 1945

Date of writing Report 28.6.45 When handed in at Local Office 28.6.45 Port of NEWCASTLE-ON-TYNE

No. in Survey held at NEWCASTLE-ON-TYNE Date, First Survey (1943) Jan. 11th Last Survey June 25th 1945

Reg. Book. 82 (Number of Visits 126) Gross 8553 Tons Net 4953

on the TANKER "M/V BRITISH VIRTUE."

Built at NEWCASTLE. By whom built SWAN, HUNTER & WIGHAM RICHARDSON, LTD Yard No. 1762. When built 1945.

Engines made at NEWCASTLE. By whom made S.H. & W.R. Engine No. 1762. When made 1945.

Boilers made at NEWCASTLE. By whom made S.H. & W.R. Boilers No. 1762. When made 1945.

Nominal Horse Power 687. Owners BRITISH TANKER Port belonging to

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR DONKEY.~~

Manufacturers of Steel STEEL COY OF SCOTLAND. (Letter for Record S.)

Total Heating Surface of Boilers 3530 sq. ft. Is forced draught fitted YES. Coal or Oil fired OIL OR WASTE GAS.

No. and Description of Boilers TWO - SINGLE ENDED. MULTITUBULAR. Working Pressure 150 lbs/sq. in.

Tested by hydraulic pressure to 275 lbs/sq. in. Date of test 10.5.44. No. of Certificate 1105. Can each boiler be worked separately YES.

Area of Firegrate in each Boiler OIL FIRED. No. and Description of safety valves to each boiler TWO - 2 1/4" DIAM COCKBURNS IMPROVED HIGH LIFT.

Area of each set of valves per boiler { per Rule 7.56 sq. in. as fitted 7.95 sq. in. Pressure to which they are adjusted 150 lbs/sq. in. 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 2'-3". 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 YES.

Largest internal dia. of boilers 12'-4 3/8". Length 11'-0". Shell plates: Material STEEL. Tensile strength 30 34 TONS.

Thickness 13/16". Are the shell plates welded or flanged NO. Description of riveting: circ. seams { end D.R. OVERLAP. inter. NONE.

long. seams T.R. D.B.S. Diameter of rivet holes in { circ. seams 15/16". long. seams 7/8". Pitch of rivets { 3'08". 6 3/16".

Percentage of strength of circ. end seams { plate 69.59. rivets 42.24. Percentage of strength of circ. intermediate seam { plate ✓ rivets ✓

Percentage of strength of longitudinal joint { plate 85.85. rivets 85.96. combined 88.91. WORKING PRESSURE OF SHELL BY RULES:- 151 lbs/sq. in.

Thickness of butt straps { outer 5/8". inner 3/4". No. and Description of Furnaces in each Boiler TWO - DEIGHTON CORRUGATED.

Material STEEL. Tensile strength 26/30T. Smallest outside diameter 3'-7 1/16".

Length of plain part { top 15/32". bottom 15/32". Description of longitudinal joint FIRE WELDED.

Dimensions of stiffening rings on furnace or c.c. bottom NONE. WORKING PRESSURE OF FURNACE BY RULES:- 156 lbs/sq. in.

End plates in steam space: Material STEEL. Tensile strength 26/30T. Thickness 15/16". Pitch of stays 17 3/4" x 14 5/8".

How are stays secured NUTS INSIDE & OUTSIDE. WORKING PRESSURE BY RULES:- 152 lbs/sq. in.

Tube plates: Material { front STEEL. back STEEL. Tensile strength { 26/30T. Thickness { 15/16". 3/4".

Mean pitch of stay tubes in nests 7 1/2" x 11 1/4". Pitch across wide water spaces 13 1/2". WORKING PRESSURE BACK 228 lbs/sq. in.

Girders to combustion chamber tops: Material STEEL. Tensile strength 28/32T. Depth and thickness of girder at centre 7 3/4" x 5/8" x 2. Length as per Rule 30 1/2". Distance apart 9". No. and pitch of stays in each 2 AT 9 3/8".

Combustion chamber plates: Material STEEL. Tensile strength 26/30T. Thickness: Sides 5/8". Back 3/4". Top 5/8". Bottom 5/8".

Pitch of stays to ditto: Sides 9 3/8" x 9". Back 7 1/2" x 9". Top 9 3/8" x 9". Are stays fitted with nuts or riveted over NUTTED BOTH ENDS.

Front plate at bottom: Material STEEL. Tensile strength 26/30T. Thickness 15/16". Lower back plate: Material STEEL. Tensile strength 26/30T. Thickness 15/16".

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

Main stays: Material STEEL. Tensile strength 28/32T. Diameter { At body of stay, 2 3/8". or over threads 6.

Screw stays: Material STEEL. Tensile strength 26/30T. Diameter { At turned off part, 1 1/2". or over threads 9.

Are the stays drilled at the outer ends ☒ No. Margin stays: Diameter { At turned off part, ☒ 15/8" or Over threads ☒ 1 3/4".
No. of threads per inch 9
Tubes: Material STEEL External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 10wg 1/4" 5/16" No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 3/4" Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 17 1/2" x 13 1/16" No. of rivets and diameter of rivet holes 38 - 1 1/8" diam.
Outer row rivet pitch at ends 8" Depth of flange if manhole flanged 2 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 Thickness of crown No. and diameter of stays Inner radius of crown
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 NONE 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 easing gear
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 YES.

The foregoing is a correct description,

G. F. Mundy Manufacturer.

Dates of Survey { During progress of work in shops - - - During erection on board vessel - - -

See Machinery Report

Are the approved plans of boiler and superheater forwarded herewith N/c. 28-5-42. (If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case YES. If so, state Vessel's name and Report No. EMPIRE MACCABE SHNR 1724.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These donkey boilers have been constructed under Special Survey in accordance with the approved plans and the Society's Rules, and the materials and workmanship are good.
The boilers have been efficiently fitted on board and tested under steam with satisfactory results.

Survey Fee £
Travelling Expenses (if any) £

See Machinery Report

When applied for, 19
When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 20 JUL 1945

Assigned

See fe. machy rpt.



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