

REPORT ON BOILERS.

No. 23422

Received at London Office.....

Date of writing Report 2nd Aug. 1948 When handed in at Local Office 6th Aug. 1948 Port of GREENOCK

No. in Reg. Book. GREENOCK Survey held at GREENOCK Date, First Survey 5th DECEMBER 1947 Last Survey 29th July 1948

on the SINGLES "BRITISH ADVOCATE" OIL ENG. (Number of Visits.....) Tons { Gross 8573.22 Net 4936.77

Master Built at PORT GLASGOW By whom built LITHGOWS L^{td} Yard No. 1033 When built 1945

Engines made at GREENOCK By whom made JOHN G. KINCAID & CO L^{td} Engine No. K189 When made 1948

Boilers made at do By whom made do Boiler No. K189 When made 1948

Nominal Horse Power 625 Owners BRITISH TANKER CO L^{td} Port belonging to LONDON

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

Manufacturers of Steel COLVILLES L^{td} (Letter for Record S)

Total Heating Surface of Boilers 4138⁴ = 2660 Is forced draught fitted YES ✓ Coal or Oil fired Oil ✓ Working Pressure 150 lbs ✓

No. and Description of Boilers two cylindrical SE. No. of Certificate 2479

Tested by hydraulic pressure to 275 Date of test 29-4-48 Can each boiler be worked separately Yes ✓

Area of Firegrate in each Boiler 7.84 No. and Description of safety valves to each boiler I.H.L. double opening x 2

Area of each set of valves per boiler 7.96 Pressure to which they are adjusted 153 lbs 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 Boiler on Tween deck Is the bottom of the boiler insulated Yes ✓

Smallest distance between shell of boiler and tank top plating 13'-0" Length 11'-6" Shell plates: Material S Tensile strength 28/32 tons ✓

Thickness 29/32 Are the shell plates welded or flanged No. Description of riveting: circ. seams { end DR ✓ inter ✓ } Pitch of rivets { 3.158 ✓ } TRDBS ✓

long. seams TRDBS Diameter of rivet holes in { circ. seams 15/16 ✓ } Pitch of rivets { 6.375 ✓ } { long. seams 15/16 ✓ }

Percentage of strength of circ. end seams { plate 68.3 } Percentage of strength of circ. intermediate seam { plate ✓ } { rivets 43.8 } { rivets ✓ }

Percentage of strength of longitudinal joint { plate 85.29 } Working pressure of shell by Rules 155.6 lbs. { rivets 88.7 } { combined 88.3 }

Thickness of butt straps { outer 11/16 } No. and Description of Furnaces in each Boiler Two Dighton corrugated { inner 13/16 } Tensile strength 26/30 tons ✓ Smallest outside diameter 3'-7 15/16" ✓

Material S Thickness of plates { crown 15" } Description of longitudinal joint Weld { bottom 32 }

Length of plain part { top ✓ } Dimensions of stiffening rings on furnace or e.c. bottom ✓ Working pressure of furnace by Rules 26/30 tons ✓ Thickness 1 1/32" ✓ Pitch of stays 18 1/2" x 16 1/2" ✓

End plates in steam space: Material S Tensile strength 26/30 tons ✓ Thickness 1 1/32" ✓

How are stays secured DN Working pressure by Rules 26/30 tons ✓ Thickness { 7/8" ✓ } { 11/16" ✓ }

Tube plates: Material { front S } Tensile strength { 26/30 tons ✓ } Thickness { 7/8" ✓ } { back S } { 11/16" ✓ }

Mean pitch of stay tubes in nests 9.375" Pitch across wide water spaces 13.5" Working pressure { front 26/30 tons ✓ } { back 26/30 tons ✓ }

Girders to combustion chamber tops: Material S Tensile strength 29/33 tons ✓ Depth and thickness of girder at centre 8 3/4" x 1 1/2" Length as per Rule 2'-10 21/32" Distance apart 9 1/2" No. and pitch of stays in each 3 @ 8 1/4" Working pressure by Rules 26/30 tons ✓

Tensile strength 26/30 tons ✓ Thickness: Sides 2 1/32" ✓ Back 2 1/32" ✓ Top 2 1/32" ✓ Bottom 2 1/32" ✓

Pitch of stays to ditto: Sides 8 x 8 1/4" ✓ Back 8 x 8 1/4" ✓ Top 9 1/2 x 8 1/4" ✓ Are stays fitted with nuts or riveted over Sides & back: nuts outside, riveted inside ✓

Working pressure by Rules 26/30 tons ✓ Front plate at bottom: Material S Tensile strength 26/30 tons ✓ Thickness 7/8" ✓

Lower back plate: Material S Tensile strength 26/30 tons ✓ Thickness 23/32" ✓

Pitch of stays at wide water space Plan = 14 1/2" (13 1/2" x 8 1/4") Are stays fitted with nuts or riveted over Nuts both ends ✓

Working pressure 26/30 tons ✓ Main stays: Material S Tensile strength 28/32 tons ✓

Diameter { At body of stay 2 3/8" } No. of threads per inch 6 ✓ Area supported by each stay 26/30 tons ✓ { Over threads 1 3/8" x 1 1/2" }

Working pressure by Rules 26/30 tons ✓ Screw stays: Material S Tensile strength 26/30 tons ✓

Diameter { At turned off part 1 3/8" x 1 1/2" } No. of threads per inch 9 ✓ Area supported by each stay 26/30 tons ✓ { Over threads 1 3/8" x 1 1/2" }



Working pressure by Rules... Are the stays drilled at the outer ends *No* ✓ Margin stays: Diameter { At turned off part... *1 3/8* or Over threads...
 No. of threads per inch *9* ✓ Area supported by each stay... Working pressure by Rules...
 Tubes: Material *S* External diameter { Plain... *2 1/2* Stay... *2 1/2* Thickness { *10mg* *1/4* *3/16* No. of threads per inch *9* ✓
 Pitch of tubes *3 3/4 x 3 3/4* ✓ Working pressure by Rules... Manhole compensation: Size of opening
 shell plate *16 1/2" x 20 1/2"* Section of compensating ring *2' 9 1/2" x 2' 5 1/2" x 1 1/16"* No. of rivets and diameter of rivet holes *44 - 1 1/16* ✓
 Outer row rivet pitch at ends *7 1/2"* ✓ Depth of flange if manhole flanged *McNeil type door* 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...
 of rivets in outer row in dome connection to shell... Size of doubling plate under dome... Diameter of rivet holes and pitch...

Type of Superheater

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... Working pressure as per Rules...
 Pressure to which the safety valves are adjusted... Hydraulic test pressure...
 tubes... forgings and castings... and after assembly in place... Are drain cocks of 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, for JOHN G. KINCAID & CO. LIMITED. *J. Kincaid* Chief Draughtsman, Manufacturer

Dates of Survey while building { During progress of work in shops - - - During erection on board vessel - - - }
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) ✓
 Total No. of visits... ✓
SEE ACCOMPANYING MACHINERY REPORT

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

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

These boilers have been constructed under Special Survey in accordance with the Rules & approved plans. The materials & workmanship are sound & good. Their safety valves have been adjusted for a working pressure of 150 lbs. For recommendations please see machinery report job FE H°

Survey Fee £ : When applied for... 19...
 Travelling Expenses (if any) £ : When received... 19...
See machinery report

Charles J. Hunter
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute... GLASGOW 27 AUG 1948

Assigned... SEE ACCOMPANYING MACHINERY REPORT.

