

REPORT ON BOILERS.

No. 110702

Received at London Office

SEP 1957

Date of writing Report 3.9.53 When handed in at Local Office 3.9.53 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book 35053 Survey held at WALLSEND-ON-TYNE Date, First Survey 6.2.52 Last Survey 31.8.53

on the M.V. "BURMAH SAPPHIRE" (Number of Visits 155) Tons Gross 6230.88 Net 3354.23

Built at WALLSEND-ON-TYNE By whom built SWAN, HUNT & WIGHAM & RICHARDSON LTD Yard No. 1821 When built 1953

Engines made at WALLSEND-ON-TYNE By whom made WALLSEND SLIPWAY & ENG. CO. LTD Engine No. 1040 When made 1953

Boilers made at WALLSEND-ON-TYNE By whom made WALLSEND SLIPWAY & ENG. CO. LTD Boiler No. 1040 When made 1953

Nominal Horse Power ✓ Owners THE BURMAH OIL CO (TANKERS) LTD Port belonging to LONDON

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

Manufacturers of Steel COLVILLES LTD & CONSETT IRON CO LTD (Letter for Record 3)

Total Heating Surface of Boilers 2108 sq ft Of Superheaters ✓

Total for Register Book ✓ Is forced draught fitted YES Coal or Oil fired Oil only (WINGS)

No. and Description of Boilers ONE SINGLE ENDED Working Pressure 150 lbs/sq

Tested by hydraulic pressure to 275 lbs/sq Date of test 8.7.53 No. of Certificate 1533 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 7.990 No. and Description of safety valves to each boiler 1-2 1/2 DOUBLE IMPROVED HIGH LIFT

Area of each set of valves per boiler 9.81740 Pressure to which they are adjusted 150 lbs/sq Are they fitted with easing gear YES

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler NO MAIN BOILERS

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating 1'-10" Is the bottom of the boiler insulated YES

Largest internal dia. of boiler 13'-4 3/16" Length 11'-6" Shell plates: Material MILD STEEL Tensile strength 29/33 Tons/sq

If fusion welded, state name of welding firm 29/32 Have all the requirements of the Rules for Class I vessels been complied with ✓ Thickness 29/32 Are the shell plates welded or flanged NO Description of riveting: circ. seams DR OVERLAP

long. seams TH DOUBLE BUTT STRAP Diameter of rivet holes in 31/32 Pitch of rivets 3.01

Percentage of strength of circ. end seams 42.8 Percentage of strength of circ. intermediate seam ✓

Percentage of strength of longitudinal joint 86.39 Working Pressure of Shell by Rules 153 lbs/sq

Thickness of butt straps 29/32 No. and Description of Furnaces in each Boiler THREE CORRUGATED DELFTON TYPE

Material MILD STEEL Tensile strength 26/30 Tons/sq Smallest outside diameter 3'-3 1/2"

Length of plain part ✓ Thickness of plates 1/16 Description of longitudinal joint WELD

Dimensions of stiffening rings on furnace or c.c. bottom NONE Working Pressure of Furnace by Rules 158 lbs/sq

End plates in steam space: Material MILD STEEL Tensile strength 26/30 Tons/sq Thickness 1 1/16 Pitch of stays 18" x 18"

How are stays secured ELECTRIC WELDED TO END PLATES

Tube plates: Material MILD STEEL Tensile strength 26/30 Tons/sq Thickness 1 1/16

Mean pitch of stay tubes in nests 11.25 Pitch across wide water spaces 13 1/2

Girders to combustion chamber tops: Material MILD STEEL Tensile strength 29/33 Tons/sq Depth and thickness of girder at centre 9 1/2" x 29/32 Length as per Rule 29 1/4 Distance apart 8 No. and pitch of stays in each ELECTRIC WELDED TO CC TOP

Combustion chamber plates: Material MILD STEEL

Tensile strength 26/30 Tons/sq Thickness: Sides 3/4 Back 3/4 Top 3/4 Bottom 3/4

Pitch of stays to ditto: Sides 9 3/4" x 8 1/2" Back 8 1/2" x 9" Top 9 1/2" x 8 1/2" Are stays fitted with nuts or riveted over EW TO PLATES

Front plate at bottom: Material MILD STEEL Tensile strength 26/30 Tons/sq

Thickness 1 1/16 Lower back plate: Material MILD STEEL Tensile strength 26/30 Tons/sq Thickness 7/8

Pitch of stays at wide water space 13 1/2 Are stays fitted with nuts or riveted over NO EW THROUGH PLATES

Main stays: Material MILD STEEL Tensile strength 28/32 Tons/sq

Diameter 2 1/2 No. of threads per inch EW TO END PLATES

Screw stays: Material MILD STEEL Tensile strength 26/30 Tons/sq

Diameter 1 3/4 No. of threads per inch EW TO PLATES BUT 9 THREADS THROUGH SHELL PLATE ONLY

Are the stays drilled at the outer ends. *No* ✓ Margin stays: Diameter *1 3/4* x 2
No. of threads per inch *FW TO PLATES* ✓
Tubes: Material *Hot Rolled SEAMLESS STEEL* ✓ External diameter *2 1/2* ✓ Thickness *10 sw 3/16* ✓ No. of threads per inch *9* ✓
Pitch of tubes *3 3/4 x 3 3/4* ✓ Manhole compensation: Size of opening in
shell plate *17 13/16 x 17 13/16* ✓ Section of compensating ring *2 { (4 1/2 x 1 1/2) + (2 1/2 x 1 1/2) }* ✓ No. of rivets and diameter of rivet holes *FW* ✓
Outer row rivet pitch at ends *FW* ✓ Depth of flange if manhole flanged *FW* ✓ Steam Dome: Material *NONE* ✓
Tensile strength *FW* ✓ Thickness of shell *FW* ✓ Description of longitudinal joint *FW* ✓
Diameter of rivet holes *FW* ✓ Pitch of rivets *FW* ✓ Percentage of strength of joint *FW* ✓
Internal diameter *FW* ✓ Thickness of crown *FW* ✓ No. and diameter of
stays *FW* ✓ Inner radius of crown *FW* ✓
How connected to shell *FW* ✓ Size of doubling plate under dome *FW* ✓ Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell *FW* ✓
Type of Superheater *NONE* ✓ Manufacturers of *FW* ✓
Number of elements *FW* ✓ Material of tubes *FW* ✓ Internal diameter and thickness of tubes *FW* ✓
Material of headers *FW* ✓ Tensile strength *FW* ✓ Thickness *FW* ✓ Can the superheater be shut off and
the boiler be worked separately *FW* ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *FW* ✓
Area of each safety valve *FW* ✓ Are the safety valves fitted with easing gear *FW* ✓
Pressure to which the safety valves are adjusted *FW* ✓ Hydraulic test pressure:
tubes *FW* ✓ forgings and castings *FW* ✓ and after assembly in place *FW* ✓ Are drain cocks or
valves fitted to free the superheater from water where necessary *FW* ✓
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *YES* ✓

The foregoing is a correct description
FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED
W. H. H. H. Manufacturer.

Dates of Survey while building *During progress of work in shops - -* *During erection on board vessel - - -* *PLEASE SEE REPORT L.B.*
Are the approved plans of boiler and superheater forwarded herewith *YES* ✓
(If not state date of approval.)
Total No. of visits *155*

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The boiler has been constructed under Special Survey in accordance with the Requirements of the Rules & the approved Plans.*
The materials & workmanship are good.
The boiler has been satisfactorily installed on board, examined under steam & the safety valves adjusted to the approved pressure.

1 SE Boiler
Survey Fee *210.89* £ *33 : 0 : 0* ✓ When applied for *- 8 SEP 1953*
Travelling Expenses (if any) £ : : When received *19*

J. A. Onle.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUESDAY 6 - OCT 1953*

Assigned *Sir F. E. Moly. sp. t.*