

REPORT ON BOILERS.

No. 110701

Date of writing Report 3.9.53 When handed in at Local Office 3.9.53 Port of NEWCASTLE-ON-TYNE
 Received at London Office 9 SEP 1953
 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. BUKMAH SAPPHIRE (Number of Visits 155) Tons Gross 6230.88
 Supplement WALLSEND-ON-TYNE By whom built SWAN, HUNTER & WIGHAM RICHARDSON L^{td} Yard No. 1821 When built 1953
 Engines made at WALLSEND-ON-TYNE By whom made WALLSEND SLIPWAY & ENG. CO. L^{td} Engine No. 1040 When made 1953
 Boilers made at WALLSEND-ON-TYNE By whom made WALLSEND SLIPWAY & ENG. CO. L^{td} Boiler No. 1040 When made 1953
 Nominal Horse Power ✓ Owners THE BUKMAH OIL CO (TANKERS) L^{td} Port belonging to LONDON

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

Manufacturers of Steel COLVILLES L^{td} & CONSETT IRON CO. L^{td} (Letter for Record S)
 Total Heating Surface of Boilers 1775 sq ft Of Superheaters ✓
 Total for Register Book ✓ Is forced draught fitted YES Coal or Oil fired OIL OR L^{td} GAS
 No. and Description of Boilers ONE SINGLE ENDED Working Pressure 150 LBS/SQ IN
 Tested by hydraulic pressure to 275 LBS/SQ IN Date of test 8.7.53 No. of Certificate 1534 Can each boiler be worked separately ✓
 Area of Firegrate in each Boiler 6.72 sq ft No. and Description of safety valves to each boiler 1-2 1/4" DOUBLE IMPROVED HIGH LIFT
 Area of each set of valves per boiler 7.95 sq ft 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 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 2'-6" Is the bottom of the boiler insulated YES
 Largest internal dia. of boilers 12'-1 5/16" Length 11'-6" OVERALL Shell plates: Material MILD STEEL Tensile strength 28.1/33 TONS/SQ IN
 If fusion welded, state name of welding firm ✓ Have all the requirements of the Rules for Class I vessels been complied with ✓ Thickness 27/32" Are the shell plates welded or flanged NO Description of riveting: circ. seams end DE OVERLAP
 long. seams TR DOUBLE BUTT STRAP Diameter of rivet holes in 29/32" Pitch of rivets 2.8"
 Percentage of strength of circ. end seams plate 67.6 Percentage of strength of circ. intermediate seam plate 86
 Percentage of strength of longitudinal joint rivets 43.2 combined 91 WORKING PRESSURE OF SHELL BY RULES 151.9 LBS/SQ IN
 Thickness of butt straps outer 27/32" No. and Description of Furnaces in each Boiler TWO CORRUGATED DEIGHTON TYPE
 Material MILD STEEL Tensile strength 26/30 TONS/SQ IN Smallest outside diameter 3'-6 1/2"
 Length of plain part top 15/32" Thickness of plates 15/32" 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 IN
 End plates in steam space: Material MILD STEEL Tensile strength 26/30 TONS/SQ IN Thickness 1" Pitch of stays 18" x 1/6 3/4"
 How are stays secured ELECTRIC WELDED TO END PLATES
 Tube plates: Material MILD STEEL Tensile strength 26/30 TONS/SQ IN Thickness 1 3/4"
 Mean pitch of stay tubes in nests 11 1/4" Pitch across wide water spaces 13 1/2"
 Girders to combustion chamber tops: Material MILD STEEL Tensile strength 29/33 TONS/SQ IN Depth and thickness of girder at centre 10" x 29/32" Length as per Rule 29 1/4" Distance apart 9" No. and pitch of stays in each ELECTRIC WELDED TO CC TOP Combustion chamber plates: Material MILD STEEL
 Tensile strength 26/30 TONS/SQ IN 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 9" x 10 1/2" Top GIRDER END Are stays fitted with nuts or riveted over FW TO PLATES
 Front plate at bottom: Material MILD STEEL Tensile strength 26/30 TONS/SQ IN
 Thickness 1" Lower back plate: Material MILD STEEL Tensile strength 26/30 TONS/SQ IN Thickness 1"
 Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over NO FW THROUGH PLATES
 Main stays: Material MILD STEEL Tensile strength 28/32 TONS/SQ IN
 Diameter 2 1/2" No. of threads per inch ELECTRIC WELDED TO END PLATES
 Screw stays: Material MILD STEEL Tensile strength 26/30 TONS/SQ IN
 Diameter 1 3/4" No. of threads per inch FW TO PLATES BUT 9 THREADS THROUGH SHELL PLATE ONLY

Are the stays drilled at the outer ends No. ✓ Margin stays: Diameter { At turned off part... 1 3/4" ✓ or 1 1/4" ✓ Over threads... 2" ✓ }

No. of threads per inch EW. ✓

Tubes: Material SEAMLESS STEEL ✓ External diameter { Plain... 2 1/2" ✓ Stay... 2 1/2" ✓ } Thickness { 10/16" ✓ } 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 1/2" x 13 1/2" ✓ Section of compensating ring 2 { (4 1/4" x 1) + (2 1/4" x 1) } ✓ No. of rivets and diameter of rivet holes EW. ✓

Outer row rivet pitch at ends EW. ✓ Depth of flange if manhole flanged EW. ✓ Steam Dome: Material NONE. ✓

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 ✓

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,
FOR THE WALLSEND SLIPWAY & ENGINEERING CO., LIMITED
W. H. H. H. Manufacturer.

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

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.) 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 1775 7/6 £ 27 : 0 : 0
Travelling Expenses (if any) £ : :
When applied for, - 8 SEP 1953
When received 19

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

Committee's Minute TUESDAY 6 - OCT 1953

Assigned See F. E. mch. rpt.



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Foundation