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## REPORT ON BOILERS.

No. 109015

Received at London Office 5-JUL-1952

Date of writing Report 31. 12 19 51 When handed in at Local Office 31. 12 19 51 Port of NEWCASTLE-ON-TYNE.

No. in Survey held at WALLSEND-ON-TYNE Date, First Survey 28. 8. 51. Last Survey 31. 12 19 51.

g. Book. on the M.V. "CLUTHA RIVER" (Number of Visits 10.) Tons { Gross 12323 Net 1197

uilt at HEBBURN-ON-TYNE. By whom built R & W HAWTHORN LESLIE & CO. L<sup>td</sup> Yard No. 711 When built

Engines made at NEWCASTLE-ON-TYNE By whom made R & W HAWTHORN LESLIE & CO. L<sup>td</sup> Engine No. 4098 When made

Boilers made at WALLSEND-ON-TYNE By whom made WALLSEND SLIPWAY & ENG. CO. L<sup>td</sup> Boiler No. 4413 When made 1951

minial Horse Power 4980/12 = 415 Owners BRITISH EMPIRE STEAM NAV. CO. LD Port belonging to LONDON.

MULTITUBULAR BOILERS ~~MAINS~~, ~~HEATING~~, OR DONKEY.

Manufacturers of Steel COLVILLES L<sup>td</sup> (Letter for Record S)

Total Heating Surface of Boilers 2 x 2490 = 4980 sq ft Of Superheaters

al for Register Book Is forced draught fitted YES Coal or Oil fired OIL OR EX. GAS.

and Description of Boilers 2 SINGLE ENDED Working Pressure 180 LBS/p

ted by hydraulic pressure to 320 LBS/p Date of test 24. 12. 51 No. of Certificate 1473 Can each boiler be worked separately YES

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

a of each set of valves per boiler (per Rule 7.995 D. as fitted 9.8174 D. Pressure to which they are adjusted 186 LBS. Are they fitted with easing gear YES.

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

llest distance between boilers or uptakes and bunkers or woodwork 2'-6" Is oil fuel carried in the double bottom under boilers. No

llest distance between shell of boiler and tank top plating ON AFT EX FLAT. Is the bottom of the boiler insulated YES

est internal dia. of boilers 13'-9 3/4" Length 11'-9" OVERLAP Shell plates: Material MILD STEEL Tensile strength 29/33 Tons/p

ision welded, state name of welding Firm Have all the requirements of the Rules for Class I vessels

complied with Thickness 1 1/8" Are the shell plates welded or flanged NO Description of riveting: circ. seams end DR. OVERLAP

seams TR DOUBLE BUTT STRAP Diameter of rivet holes in (circ. seams 1 3/16" long seams 1 3/16" Pitch of rivets 3.64" 8 3/8"

ntage of strength of circ. end seams (plate 67 rivets 43 Percentage of strength of circ. intermediate seam (plate rivets)

ntage of strength of longitudinal joint (plate 85.8 rivets 87.0 combined 89 WORKING PRESSURE OF SHELL BY RULES 185 LBS/p

ness of butt straps (outer 1" inner 1" No. and Description of Furnaces in each Boiler THREE CORRUGATED DEIGHTON TYPE.

ial MILD STEEL Tensile strength 26/30 Tons/p Smallest outside diameter 3'-4 1/2"

h of plain part (top Thickness of plates 1 3/2" Description of longitudinal joint WELD

isions of stiffening rings on furnace or c.c. bottom NONE WORKING PRESSURE OF FURNACE BY RULES 190 LBS/p

plates in steam space: Material MILD STEEL Tensile strength 26/30 Tons/p Thickness 1 1/4" Pitch of stays 19 1/2" x 19 1/2"

re stays secured ELECTRIC WELDED TO PLATES

plates: Material (front MILD STEEL Tensile strength 26/30 Tons/p Thickness 1" 3/4"

pitch of stay tubes in nests 10.28" Pitch across wide water spaces 13 1/2"

rs to combustion chamber tops: Material MILD STEEL Tensile strength 29/33 Tons/p Depth and thickness of girder

tre 11" x 1 1/8" Length as per Rule 32 1/2" Distance apart 8" No. and pitch of stays

h EW TO PLATES Combustion chamber plates: Material MILD STEEL

strength 26/30 Tons/p Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"

f stays to ditto: Sides 8 1/8" x 8 1/4" Back 8 3/4" x 9 1/2" To GIRDERS EW Are stays fitted with nuts or riveted over NO

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

ess 1" Lower back plate: Material MILD STEEL Tensile strength 26/30 Tons/p Thickness 7/8"

f stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over NO

tays: Material MILD STEEL Tensile strength 28/32 Tons/p

At body of stay 3/4" No. of threads per inch EW TO PLATES

Over threads 1 1/2" Tensile strength 26/30 Tons/p

At turned off part 1 1/2" No. of threads per inch EW TO PLATES BUT 9 THREADS THROUGH SHELL ONLY



Are the stays drilled at the outer ends... *No* ✓

Margin stays: Diameter { At turned off part... *1 3/4"* ✓  
or  
Over threads...

No. of threads per inch *EW TO PLATES*

Tubes: Material *NOT ROLLED SEAMLESS STEEL* External diameter { Plain *2 1/2"* ✓  
Stay *2 1/2"* ✓ Thickness { *9/16"* ✓ No. of threads per inch *9* ✓

Pitch of tubes *3 3/4" x 3 5/8"* Manhole compensation: Size of opening in shell plate *EW TO PLATE*

Section of compensating ring *17 1/2" x 13 1/2"* No. of rivets and diameter of rivet holes *EW TO PLATE*

Depth of flange if manhole flanged *3 3/8"* Steam Dome: Material *NONE*

Outer row rivet pitch at ends... Thickness of shell... Description of longitudinal joint... Plate... Rivets...

Tensile strength... Pitch of rivets... Percentage of strength of joint... No. and diameter

Diameter of rivet holes... Thickness of crown... Inner radius of crown... Diameter of rivet holes and pitch

Internal diameter... 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... Tubes... Steel forgings... Steel castings... Internal diameter and thickness of tubes... Can the superheater be shut off

*None* at Superheater... Manufacturers of... Thickness... Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *YES*

Number of elements... Material of tubes... Tensile strength... Area of each safety valve... Are the safety valves fitted with easing gear... Hydraulic test pressure... Are drain cocks... Pressure to which the safety valves are adjusted... and after assembly in place... valves fitted to free the superheater from water where necessary... forgings and castings...

The foregoing is a correct description,  
FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED  
*J.B. Kerr* MANAGING DIRECTOR

Dates of Survey while building { During progress of work in shops... *11.5.51 AUG. 16, NOV. 12, 19, DEC. 6, 12, 14, 18, 20, 31* Are the approved plans of boiler and superheater forwarded herewith *YES*  
(If not state date of approval.)  
During erection on board vessel... Total No. of visits... *10*

Is this Boiler a duplicate of a previous case... ✓ If so, state Vessel's name and Report No. *These two donkey boilers have been*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *Constructed under Special Survey, in accordance with the Approved plan of the Society's Rules*  
*The materials & workmanship are good.*  
*The boilers will be sent to Hawthorn Leslie Shipyard at Hebburn to be installed on board the vessel.*  
*These boilers have been satisfactorily installed in M.V. "CLUT RIVER", safety valves adjusted to lift at 180 lbs/10", examined under full working conditions and found efficient.*

*T. J. Morris*  
SURVEYOR TO LLOYD'S REGISTER  
NEWCASTLE-ON-TYNE.

Survey Fee *4.15 PM £ 66 : 10 : 0* When applied for *31 DEC 1951*  
Travelling Expenses (if any) £ : : When received... 19...

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

FRI. 1 AUG 1952

Committee's Minute... Assigned *See P.E. mch. rpt.*