

## REPORT ON BOILERS.

No. 80456

Date of writing Report 3 June 1926 When handed in at Local Office 9/6/26 Port of NEWCASTLE-ON-TYNE  
Received at London Office 16 JUN 1926  
No. in Reg. Book. Surrey held at Walker Date, First Survey 27 Aug 1925 Last Survey 17 June 1926  
on the Twin Screw Steamer DOMINIA (Number of Visits —) Gross 9250 Tons Net 4700  
Master — Built at Walker By whom built S. H. W. R. Ld Yard No. 1216 When built 1926  
Engines made at Walker By whom made Saunders Hunter, Lougham Richardson Ld Engine No. 1216 When made 1926  
Boilers made at Walker By whom made Saunders Hunter, Lougham Richardson Ld Boiler No. 1216 When made 1926  
Nominal Horse Power 932 Owners Telegraph Construction and Maintenance Co Ld Port belonging to London

## THREE-AFT

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel David Colville & Sons Ld ✓  
Total Heating Surface of Boilers 9963 sq ft ✓ (Letter for Record S ✓)  
No. and Description of Boilers 3. SE. CYL. MULTITUBULAR ✓ Is forced draught fitted yes ✓ Coal or Oil fired oil ✓  
Tested by hydraulic pressure to 350 lb ✓ Date of test 5.3.26 No. of Certificate 9977 ✓ Can each boiler be worked separately yes ✓  
Area of Firegrate in each Boiler — No. and Description of safety valves to each boiler two, direct spring, high lift ✓  
Area of each set of valves per boiler {per Rule 7.71 sq ft ✓ as fitted 8.29 sq ft ✓ Pressure to which they are adjusted 205 lb ✓ Are they fitted with easing gear yes ✓  
In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler none,  
Smallest distance between boilers or uptakes and bunkers or woodwork 18" ✓ Is oil fuel carried in the double bottom under boilers yes ✓  
Smallest distance between shell of boiler and tank top plating 2'-0" ✓ Is the bottom of the boiler insulated YES ✓  
Largest internal dia. of boilers 16'-9 1/8" Length 12'-0" ✓ Shell plates: Material Steel ✓ Tensile strength 30/34 tons ✓  
Thickness 1 1/16" Are the shell plates welded or flanged no ✓ Description of riveting: circ. seams {end D.R. LAP. ✓ inter. — ✓  
long. seams D.B.S. TR ✓ Diameter of rivet holes in {circ. seams 1 1/2" ✓ long. seams 1 7/16" ✓ Pitch of rivets { 4.419 ✓ 9.5/8 ✓  
Percentage of strength of circ. end seams {plate 66.05% ✓ rivets 42.66% ✓ Percentage of strength of circ. intermediate seam {plate 85.06% ✓ rivets 84.31% ✓  
Percentage of strength of longitudinal joint {plate 86.99% ✓ rivets 86.99% ✓ Working pressure of shell by Rules 201 lb ✓  
Thickness of butt straps {outer 1 3/32" ✓ inner 1 7/32" ✓ No. and Description of Furnaces in each Boiler 4 Dighton ✓  
Material Steel ✓ Tensile strength 26/30 tons ✓ Smallest outside diameter 3'-5 7/8" ✓  
Length of plain part {top — ✓ bottom — ✓ Thickness of plates {crown 5/8" ✓ bottom — ✓ Description of longitudinal joint weld ✓  
Dimensions of stiffening rings on furnace or c.c. bottom — Working pressure of furnace by Rules 217 lb ✓  
End plates in steam space: Material Steel ✓ Tensile strength 26/30 tons ✓ Thickness 1 3/16" ✓ Pitch of stays 19x17" ✓  
How are stays secured double nuts and washers ✓ Working pressure by Rules 202 lb ✓  
Tube plates: Material {front Steel ✓ back Steel ✓ Tensile strength { 26/30 tons ✓ 26/30 tons ✓ Thickness { 1" ✓ 25/32 ✓  
Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" ✓ Working pressure {front 209 lb ✓ back 229 ✓  
Girders to combustion chamber tops: Material Steel ✓ Tensile strength 28/32 tons ✓ Depth and thickness of girder — ✓  
at centre 9 3/4 x 1 3/8" Length as per Rule 33 7/16" ✓ Distance apart 9" ✓ No. and pitch of stays — ✓  
in each 3 of 8" Working pressure by Rules 205 lb ✓ Combustion chamber plates: Material Steel ✓  
Tensile strength 26/30 tons ✓ Thickness: Sides 23/32 ✓ Back C 2 1/32 W 1/16 ✓ Top 23/32 ✓ Bottom 23/32 ✓  
Pitch of stays to ditto: Sides 9 1/4 x 8 7/8 Back 9 1/2 x 8 1/2 Top 9 x 8" ✓ Are stays fitted with nuts or riveted over nuts ✓  
Working pressure by Rules 200 lb ✓ Front plate at bottom: Material Steel ✓ Tensile strength 26/30 tons ✓  
Thickness 1" ✓ Lower back plate: Material Steel ✓ Tensile strength 26/30 tons ✓ Thickness 29/32 ✓  
Pitch of stays at wide water space 13 1/2 x 9 1/4" ✓ Are stays fitted with nuts or riveted over nuts ✓  
Working Pressure 235 lb ✓ Main stays: Material Steel ✓ Tensile strength 28/32 tons ✓  
Diameter {At body of stay, 3" ✓ No. of threads per inch 6 ✓ Area supported by each stay (19 1/2 x 17) - 6.1 ✓  
Working pressure by Rules 206 lb ✓ Screw stays: Material Steel ✓ Tensile strength 26/30 tons ✓  
Diameter {At turned off part, 1 5/8" ✓ No. of threads per inch 9 ✓ Area supported by each stay (7 1/2 x 7) - 2.07 ✓



Working pressure by Rules 217 lb Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, or Over threads 1 1/8" ✓  
No. of threads per inch 9 ✓ Area supported by each stay (11 3/4 x 8 7/8) - 2.76 Working pressure by Rules 208 lb ✓  
Tubes: Material IRON External diameter { Plain 2 1/2 ✓ Thickness 9 in 9 ✓ No. of threads per inch 9 ✓  
Pitch of tubes 3 3/4 x 3 3/4 Working pressure by Rules 313 lb / 200 lb Manhole compensation: Size of opening in  
shell plate 20" x 16" Section of compensating ring 9 7/8 x 1 7/16 ✓ No. of rivets and diameter of rivet holes 32, 1 5/8" ✓  
Outer row rivet pitch at ends 11" ✓ Depth of flange if manhole flanged 2 3/4" ✓ 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 \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter of  
stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_  
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 \_\_\_\_\_ Manufacturers of { Tubes \_\_\_\_\_ 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 \_\_\_\_\_, 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 23 inclusive for boilers been complied with Yes

FOR SWAN HUNTER & WIGHAM RICHARDSON LTD.

G. F. Lundy Manufacturer.

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

See Index Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits \_\_\_\_\_

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

The Boilers built under Special Survey the material and workmanship found good and efficient:-  
The boilers tested at the makers works under hydraulic pressure & found satisfactory  
Subsequently satisfactorily fitted up on board the vessel, tested under steam under  
working conditions, and found satisfactory. Rent Safety Valves adjusted to carry the working  
pressure.

Survey Fee ... £ : : When applied for, 192  
Travelling Expenses (if any) £ : : When received, 192

L. G. Shallerross

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 25 JUN 1926

Assigned

See F. E. rpt attached



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Foundation