

## REPORT ON BOILERS.

No. 80456

Received at London Office 16 JUN 1926

Date of writing Report 3 June 1926 When handed in at Local Office 9/6/1926 Port of NEWCASTLE-ON-TYNE

No. in Surrey held at Walker

Date, First Survey 27<sup>th</sup> Aug. 1925 Last Survey 1<sup>st</sup> June 1926

on the Steel, twin screw Steamer DOMINIA.

(Number of Visits —) Gross 9250 Tons Net 4700

Master Built at Walker By whom built S. H. W. R<sup>ld</sup> Yard No. 1216 When built 1926

Engines made at Walker By whom made Swan Hunter, Lougham Richardson & Co Engine No. 1216 When made 1926

Boilers made at Walker By whom made Swan Hunter, Lougham Richardson & Co Boiler No. 1216 When made

Nominal Horse Power 932 Owners Telegraph Construction and Maintenance Co Ltd Port belonging to London

## TWO FORWARD

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

Manufacturers of Steel David Colville &amp; Sons Ltd (Letter for Record S)

Total Heating Surface of Boilers 42349 Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers 2. S.E. CYL. MULTITUBULAR Working Pressure 200lb

Tested by hydraulic pressure to 350 Date of test 16.2.26 No. of Certificate 9973 Can each boiler be worked separately yes

Area of Firegrate in each Boiler OIL FUEL No. and Description of safety valves to each boiler two direct spring high lift

Area of each set of valves per boiler per Rule 4.92 sq as fitted 4.91 sq Pressure to which they are adjusted 205lb Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

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 13'-6 1/16" Length 11'-9" Shell plates: Material Steel Tensile strength 30/34 tons

Thickness 1 5/32" Are the shell plates welded or flanged no Description of riveting: circ. seams D.R. LAP

long. seams D.B.S.T.R Diameter of rivet holes in circ. seams 1 3/16" Pitch of rivets 3.386

Percentage of strength of circ. end seams plate 64.92% rivets 43.37% Percentage of strength of circ. intermediate seam plate 85.27% rivets 85.39%

Percentage of strength of longitudinal joint plate 87.61% rivets 87.61% Working pressure of shell by Rules 200lb

Thickness of butt straps outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3. Deighton's

Material Steel Tensile strength 26/30 tons Smallest outside diameter 3'-2 13/16"

Length of plain part top 19 1/32" bottom Thickness of plates crown 1 9/32" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 222lb

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 5/32" Pitch of stays 18" x 17 1/4"

How are stays secured double nuts and washers Working pressure by Rules 200lb

Tube plates: Material front Steel back Steel Tensile strength 26/30 tons Thickness 1"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" Working pressure front 210 lbs back 229 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Depth and thickness of girder

at centre 9 1/4" x 13/8" Length as per Rule 32.6" Distance apart 8 1/2" No. and pitch of stays

in each 3 of 7 1/2" Working pressure by Rules 200lb Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 11/16" Back 11/16" W 21/32" Top 11/16" Bottom 11/16"

Pitch of stays to ditto: Sides 9 1/8" x 8 1/4" Back 8 3/4" x 8 1/8" Top 8 1/2" x 7 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 204lb Front plate at bottom: Material Steel Tensile strength 26/30 tons

Thickness 1" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 1 5/16"

Pitch of stays at wide water space 13 1/2" x 8 7/8" Are stays fitted with nuts or riveted over nuts

Working Pressure 250 LBS 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 (18 1/8" x 17 1/4") - 6.1

Working pressure by Rules 210lb 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 7.5"



Working pressure by Rules **201** ✓ Are the stays drilled at the outer ends **NO** ✓ Margin stays: Diameter { At turned off part. **17/8** ✓  
 No. of threads per inch **9"** ✓ Area supported by each stay **(99") - 2.75** Working pressure by Rules **210lb** ✓  
 Tubes: Material **Crow** ✓ External diameter { Plain **2 1/2** ✓ Thickness { **9w9** ✓ No. of threads per inch **9** ✓  
 Pitch of tubes **3 3/4** ✓ Working pressure by Rules **211lb** ✓ Manhole compensation: Size of opening in  
 shell plate **20" x 16"** Section of compensating ring **9 5/16 x 1 5/32** flanged No. of rivets and diameter of rivet holes **32 - 17/16"** ✓  
 Outer row rivet pitch at ends **10"** ✓ 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  
 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  
 Number of elements Material of tubes Steel castings 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** ✓

The foregoing is a correct description,

**SWAN, HUNTER & WIGHAM RICHARDSON, LTD.** Manufacturer.

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

*See Encl. Report*

Are the approved plans of boiler and superheater forwarded herewith  
 (If not state date of approval.) **DIRECTOR.**  
 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 under hydraulic pressure at the makers works & found satisfactory  
 Subsequently satisfactorily fitted up on board the vessel, tested under steam under working  
 condition and found satisfactory - their safety valves adjusted to carry the working  
 pressure,

Please see 14 Encl. Rept. inclos.

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

**L. G. Skalleross.**  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 25 JUN 1926

Assigned

*See A.C. rpt. attached*



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