

# REPORT ON BOILERS.

No. 16402

Received at London Office 28 MAY 1926

Date of writing Report 27 May 1926 When handed in at Local Office 27 May 1926 Port of WEST HARTLEPOOL  
 No. in Survey held at Hartlepool Date, First Survey 19 March Last Survey 21 May 1926  
 on the Main Boilers for S/S. CHEVYCHASE (Number of Visits 14) Tons { Gross  
 Net  
 Built at Middlesbro By whom built Smiths Dock Co. Ltd Yard No. 818 When built 1926  
 Engines made at Middlesbrough By whom made Smiths Dock Co. Ltd Engine No. When made 1926  
 Boilers made at Hartlepool By whom made Richardsons Westgarth & Co. Ltd Boiler No. D167 When made 1926  
 Nominal Horse Power 304 Owners Hill Steam Shipping Co. Ltd Port belonging to Newcastle

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

Manufacturers of Steel D Colville & Sons Ltd (Letter for Record S)  
 Total Heating Surface of Boilers 1554 sq. ft. Is forced draught fitted No Coal or Oil fired Coal  
 No. and Description of Boilers Two single ended Working Pressure 180  
 Tested by hydraulic pressure to 320 Date of test 21.5.26 No. of Certificate 3683 Can each boiler be worked separately Yes  
 Area of Firegrate in each Boiler 60 sq. ft. No. and Description of safety valves to each boiler Direct Spring  
 Area of each set of valves per boiler { per Rule 14.57 Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes  
 { as fitted 16.59  
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No donkey boiler  
 Smallest distance between boilers or uptakes and bunkers or woodwork 4'-0" Is oil fuel carried in the double bottom under boilers No  
 Smallest distance between shell of boiler and tank top plating 2'-0" Is the bottom of the boiler insulated No  
 Largest internal dia. of boilers 15'-6" Length 10'-9 7/8" Shell plates: Material Steel Tensile strength 28/32  
 Thickness 1 1/4" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. Lap  
 { inter. 3 3/4"  
 long. seams J.R. D.B.S. Diameter of rivet holes in { circ. seams 1 9/32" Pitch of rivets { 9"  
 { long. seams 1 9/32"  
 Percentage of strength of circ. end seams { plate 65.8 Percentage of strength of circ. intermediate seam { plate  
 { rivets 73 { rivets  
 Percentage of strength of longitudinal joint { plate 85.78 Working pressure of shell by Rules 181  
 { rivets 87  
 { combined 89  
 Thickness of butt straps { outer 1 1/8" No. and Description of Furnaces in each Boiler 3 Deighton's  
 { inner 1 1/8" Material Steel Tensile strength 26/30 Smallest outside diameter 44 3/8"  
 Length of plain part { top Thickness of plates { crown 9/16" Description of longitudinal joint Welded  
 { bottom { bottom 9/16"  
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 184  
 End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 9/32" Pitch of stays 22" x 21 1/2"  
 How are stays secured Nuts & washers Working pressure by Rules 181  
 Tube plates: Material { front Steel Tensile strength { 26/30 Thickness { 7/8"  
 { back Steel { 3/4"  
 Mean pitch of stay tubes in nests 10 3/4" Pitch across wide water spaces 14 1/2" Working pressure { front 184  
 { back 237  
 Girders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder  
 at centre 8 3/4" x 1 7/8" Length as per Rule 32 1/2" Distance apart 11 3/4" No. and pitch of stays  
 in each 3 8" Working pressure by Rules 182 Combustion chamber plates: Material Steel  
 Tensile strength 26/30 Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 23/32"  
 Pitch of stays to ditto: Sides 10" x 10" Back 9 3/4" x 10 1/8" Top 8" x 11 3/4" Are stays fitted with nuts or riveted over Nuts  
 Working pressure by Rules 180 Front plate at bottom: Material Steel Tensile strength 26/30  
 Thickness 7/8" Lower back plate: Material Steel Tensile strength 26/30 Thickness 7/8"  
 Pitch of stays at wide water space 14 1/2" x 10 1/8" Are stays fitted with nuts or riveted over Nuts  
 Working Pressure 200 Main stays: Material Steel Tensile strength 28/32  
 Diameter { At body of stay, 3 1/8" No. of threads per inch 6 Area supported by each stay 22" x 21 1/2"  
 { Over threads  
 Working pressure by Rules 180 Screw stays: Material Steel Tensile strength 26/30  
 Diameter { At turned off part, 1 3/4" No. of threads per inch 9 Area supported by each stay 10" x 10"  
 { Over threads

Working pressure by Rules 181 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8"

No. of threads per inch 9 Area supported by each stay 11 5/8" x 10 1/8" Working pressure by Rules 180

Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 8 W.G. 5 1/16" x 1/4" No. of threads per inch 9

Pitch of tubes 4 5/8" x 4 5/8" Working pressure by Rules 190 Manhole compensation: Size of opening in shell plate 13" x 16 1/2" Section of compensating ring 13 7/16" x 1 1/4" No. of rivets and diameter of rivet holes 32 1 3/32"

Outer row rivet pitch at ends 9" Depth of flange if manhole flanged ✓ 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 None 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

The foregoing is a correct description,  
For RICHARDSON'S WESTGARTH & CO., LIMITED.  
L. D. Wignall Manufacturer.  
DIRECTOR AND GENERAL MANAGER

Dates of Survey { During progress of work in shops - - - 1926 Jan 14, 22, 30. Apr 7, 13, 16, 19, 21, 26, 28 May 5, 7, 10, 12. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes.

while building { During erection on board vessel - - - Total No. of visits 14

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

These boilers have been built under Special Survey. The materials and workmanship are good. On completion they satisfactorily withstood the hydraulic test. They are being despatched to Middlesbrough for fitting on board. These boilers have now been satisfactorily fitted and secured on board, examined under steam and safety valves adjusted.

H. W. Oxford.  
Middlesbrough

Survey Fee ... £ 27: 14: 0 When applied for, 27 May 1926

Travelling Expenses (if any) £ : : When received, 16 6 1926

R. D. Shilston  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 12 OCT 1926

Assigned See Minute on  
Indab F. E. Rpt 127 47