

# REPORT ON BOILERS.

Received at London Office

Date of writing Report 4.7.1924 When handed in at Local Office 4 July 1924 Port of WEST HARTLEPOOL

No. in Reg. Book. Survey held at Hartlepool Date, First Survey 25 Jan'y Last Survey 3 July 1924

on the S S "KAMLOOPS" (Number of Visits 67.) Tons { Gross 2290 Net 1460.

Master Built at Middlesbrough By whom built Furness S B Co Ltd Yard No. 68 When built 1924

Engines made at Hartlepool By whom made Richardsons Westgarth & Co Ltd Engine No. 2645 When made 1924

Boilers made at ditto By whom made ditto Boiler No. 2645 When made 1924

Nominal Horse Power Owners Port belonging to London

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

Manufacturers of Steel D Colville & Sons & J Spencer & Sons (Letter for Record S)

Total Heating Surface of Boilers 3412 sq. ft. Is forced draught fitted no Coal or Oil fired coal

No. and Description of Boilers 2 single ended 2SB. Working Pressure 185 lb.

Tested by hydraulic pressure to 328 Date of test 15.4.24 No. of Certificate 3636 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 58.12 No. and Description of safety valves to each boiler 2 direct spring

Area of each set of valves per boiler { per Rule 10.62 as fitted 11.88 Pressure to which they are adjusted 190 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 about 4 feet Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 13-3 13/16 Length 11'-0" Shell plates: Material Steel Tensile strength 29/33

Thickness 1 3/32 Are the shell plates welded or flanged no Description of riveting: circ. seams { end 2 R Lap inter 3 3/8

long. seams R. D. B. S. Diameter of rivet holes in { circ. seams 1 3/16 long. seams 1 3/16 Pitch of rivets { 8 3/8

Percentage of strength of circ. end seams { plate 64.8 rivets 47.5 Percentage of strength of circ. intermediate seam { plate rivets

Percentage of strength of longitudinal joint { plate 85.35 rivets 92.5 combined 89.2 Working pressure of shell by Rules 185 lbs. 3cf.

Thickness of butt straps { outer 1 inner 1 No. and Description of Furnaces in each Boiler 3 Deighton's

Material Steel Tensile strength 26/28 Smallest outside diameter 39 13/16

Length of plain part { top bottom Thickness of plates { crown 17 bottom 32 Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 192.5

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 3/16 Pitch of stays 18"x19"

How are stays secured D. Nuts Working pressure by Rules 192

Tube plates: Material { front Steel back Steel Tensile strength { 26/30 Thickness { Centre 3/4 Wings 27/32

Mean pitch of stay tubes in nests 13 3/4 x 8 3/4 C 8 3/4 x 11 1/4 Pitch across wide water spaces 14 1/4 x 8 3/4 Working pressure { front 188 back 201

Girders to combustion chamber tops: Material Steel Tensile strength 26/30 Depth and thickness of girder at centre 8"x15"

Length as per Rule 27 7/8 Distance apart 11" No. and pitch of stays in each 2 8 5/8 Working pressure by Rules 194

Combustion chamber plates: Material Steel Tensile strength 26/30 Thickness: Sides 1 1/16 x 2 1/2 Back 1 1/16 Top 1 1/16 x 2 3/32 Bottom 3/4

Pitch of stays to ditto: Sides 10 5/8 x 8 3/8 Back 10 5/8 x 8 Top 10 x 8 3/8 x 11 x 8 3/8 Are stays fitted with nuts or riveted over nuts

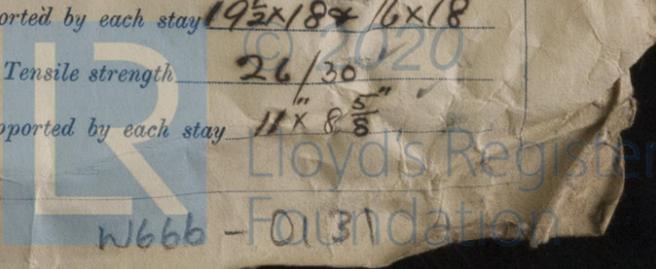
Working pressure by Rules 185 Front plate at bottom: Material Steel Tensile strength 26/30 Thickness 7/8

Lower back plate: Material Steel Tensile strength 26/30 Thickness 13/16 Pitch of stays at wide water space 15"x8" Are stays fitted with nuts or riveted over nuts

Working Pressure 186 Main stays: Material Steel Tensile strength 28/32 Diameter { At body of stay or Over threads 3" x 2 7/8

No. of threads per inch 6 Area supported by each stay 19 1/2 x 18 x 16 x 18 Working pressure by Rules 191

Screw stays: Material Steel Tensile strength 26/30 Diameter { At turned off part or Over threads 1 3/4 No. of threads per inch 9 Area supported by each stay 11 x 8 5/8



Working pressure by Rules 191 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 1.2 13/16 x 8 Working pressure by Rules 205 ✓  
 Tubes: Material Iron ✓ External diameter { Plain 3 3/4 ✓ Thickness { 8 W.G. ✓ No. of threads per inch 9 ✓  
 Stay 3 3/4 ✓ { 5/16 3/8 1/4 ✓  
 Pitch of tubes 4 1/2 x 4 3/8 ✓ Working pressure by Rules 219 Manhole compensation: Size of opening in  
 shell plate 20 1/4 x 16 1/4 Section of compensating ring 22 x 1 3/32 ✓ No. of rivets and diameter of rivet holes 38 1 3/16 ✓  
 Outer row rivet pitch at ends 8 5/8 ✓ Depth of flange if manhole flanged 4 1/4 ✓ 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 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 yes ✓

The foregoing is a correct description,  
 FOR RICHARDSONS, WESTGARTH & CO. LIMITED

J. D. Wignall Manufacturer.  
 GENERAL MANAGER.

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

See attached Report on Machinery

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.)

See accompanying machinery report.

Survey Fee ... £ See attached | When applied for, ✓ 192  
 Travelling Expenses (if any) £ Report on Machy | When received, ✓ 192

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

Committee's Minute FRI 11 JUL 1924

Assigned See other Hpl rpt - Mdb 28 11981 -



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