

# REPORT ON BOILERS.

No. 16414.

Received at London Office

2 JUL 1926

Writing Report 1<sup>st</sup> July 1926 When handed in at Local Office 1<sup>st</sup> July 1926 Port of WEST HARTLEPOOL

Survey held at West Hartlepool Date, First Survey 8 Dec/25 Last Survey 24 June 1926.

on the S S "FIRBY" (Number of Visits 79) Tons {Gross 4867.75 Net 2998.91

Built at West Hartlepool By whom built Wm Gray & Co Ltd Yard No. 979 When built 1926

Made at West Hartlepool By whom made Central Marine Engine No. 979 When made 1926

Made at ditto By whom made Engine Works Boiler No. 979 When made 1926

Horse Power Owners Ropner Shipping Co Ltd Port belonging to West Hartlepool

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

Manufacturers of Steel Steel Company of Scotland (Letter for Record S)

Heating Surface of Boilers 7614 sq. ft. Is forced draught fitted no Coal or Oil fired Coal

Description of Boilers 3 single ended Working Pressure 180 lbs

Hydraulic pressure to 320 Date of test 22.3.26 No. of Certificate 3680 Can each boiler be worked separately Yes

Firegrate in each Boiler 63 1/4 sq. ft. No. and Description of safety valves to each boiler 2 Cockburns high lift

Each set of valves per boiler per Rule 10.85 as fitted 11.88 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

For donkey boilers, state whether steam from main boilers can enter the donkey boiler

Distance between boilers or uptakes and bunkers or woodwork over 4 ft. Is oil fuel carried in the double bottom under boilers no

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

Internal dia. of boilers 15'-9 7/16 Length 11'-0" Shell plates: Material Steel Tensile strength 28/32

Are the shell plates welded or flanged no Description of riveting: circ. seams {end 2 R Lap inter. 4 R Lap

J.R. D.B.S. Diameter of rivet holes in {circ. seams 1 3/8" long. seams 1 5/16" Pitch of rivets {4 3/8" 9 1/4"

Percentage of strength of circ. intermediate seam {plate 68.5 rivets 61.7

Working pressure of shell by Rules 180

of butt straps {outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 Deightons

Steel Tensile strength 26/30 Smallest outside diameter 46 7/16"

plain part {top 1 1/2" bottom 1 1/4" Thickness of plates {crown 1 1/2" bottom 3/32" Description of longitudinal joint welded

Working pressure of furnace by Rules 188

Stays in steam space: Material Steel Tensile strength 26/30 Thickness 1 5/16" Pitch of stays 21" x 21 1/2"

Stays secured D. Nuts & washers Working pressure by Rules 181

Stays: Material {front Steel back Steel Tensile strength {26/30 Thickness {5 1/8" 13 1/16"

Working pressure {front 185 back 187

Combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder 9 1/4" x 1 1/2"

Length as per Rule 35 1/2" Distance apart 9" No. and pitch of stays 3-9"

Working pressure by Rules 180 Combustion chamber plates: Material Steel

Thickness: Sides 21 1/32" Back 21 1/32" Top 21 1/32" Bottom 3 1/4"

Stays to ditto: Sides 9 1/4" x 9" Back 9 1/4" x 9" Top 9" x 9" Are stays fitted with nuts or riveted over nuts

Pressure by Rules 183 Front plate at bottom: Material Steel Tensile strength 26/30

Lower back plate: Material Steel Tensile strength 26/30 Thickness 7 1/8"

Stays at wide water space 16" x 9 1/4" Are stays fitted with nuts or riveted over nuts

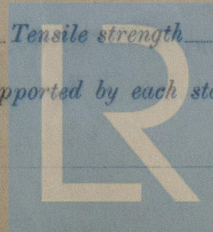
Register of Pressure 183 Main stays: Material Steel Tensile strength 28/32

At body of stay, 3 3/8" No. of threads per inch 6 Area supported by each stay 21 1/2" x 21"

Over threads 194 Screw stays: Material Steel Tensile strength 26/30

At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 9 1/4" x 9"

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Working pressure by Rules 183 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8" or Over threads 1 1/8" }  
 No. of threads per inch 9 Area supported by each stay 11 1/2" x 9 1/4" Working pressure by Rules 200  
 Tubes: Material Iron External diameter { Plain 3 1/4" Stay 3 1/4" } Thickness { 3/16" 1/4" 5/16" } No. of threads per inch 9  
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 180 Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 21" x 1 3/2" No. of rivets and diameter of rivet holes 28 1 1/2"  
 Outer row rivet pitch at ends 10" 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  
 How connected to shell Inner radius of crown Working pressure by Rules  
 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 FOR THE CENTRAL MARINE ENGINE WORKS,  
 The foregoing is a correct description,

J. H. Seames Manufacturer.  
 DIRECTOR.

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

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 Report When applied for, ✓ 192  
 Travelling Expenses (if any) £ on Machinery When received, ✓ 192

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

Committee's Minute FRI, 9 JUL 1926

Assigned See Rpt attached

