

REPORT ON BOILERS.

No. 16414.

2 JUL 1920

Received at London Office

Reporting Report 1st July 1926 When handed in at Local Office 1st July 1926 Port of WEST HARTLEPOOL

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

on the SS "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 yes

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 yes Is the bottom of the boiler insulated yes

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

Thickness of shell plates 1 3/32" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR Lap inter. yes long. seams 1 3/8" Pitch of rivets {circ. 4 3/8" long. 9 1/4"

Material J.R. D.B.S. Diameter of rivet holes in {circ. seams 1 3/8" long. seams 1 5/16" Percentage of strength of circ. intermediate seam {plate 68.5 rivets 61.7

Percentage of strength of circ. end seams {plate 85.8 rivets 87.8 Working pressure of shell by Rules 180

Percentage of strength of longitudinal joint {plate 89.1 rivets 89.1 combined 89.1

No. and Description of Furnaces in each Boiler 3 Deightons

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

Thickness of plates {crown 1 1/32" bottom 3/32" Description of longitudinal joint welded

Working pressure of furnace by Rules 188

Material Steel Tensile strength 26/30 Thickness 1 5/16" Pitch of stays 21" x 21 1/2"

Working pressure by Rules 181

Material {front Steel back Steel Tensile strength {front 26/30 back 26/30 Thickness {front 7/8" back 13/16"

Working pressure {front 185 back 187

Material Steel Tensile strength 28/32 Depth and thickness of girder

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

Working pressure by Rules 180 Combustion chamber plates: Material Steel

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

Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 183 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"

Are stays fitted with nuts or riveted over nuts

Working pressure 183 Main stays: Material Steel Tensile strength 28/32

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

Working pressure by Rules 194 Screw stays: Material Steel Tensile strength 26/30

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

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Lloyd's Register Foundation

W551-0224

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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 7/8 ✓
 or Over threads }
 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 3/4 ✓ Thickness { 9 W.G. ✓ No. of threads per inch 9 ✓
 Stay 3 3/4 ✓ }
 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 9/32" 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 _____ 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 ✓
 FOR THE CENTRAL MARINE ENGINE WORKS,
 The foregoing is a correct description,
J. H. Stearnes Manufacturer.
 DIRECTOR.

Dates { During progress of }
 of Survey { work in shops - - }
 while { During erection on }
 building { 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 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 Report attached

