

REPORT ON BOILERS.

No. 15894

Received at London Office TUE. 18 MAR. 1924

Survey Report 25th June 1921 When handed in at Local Office 29th June, 1921 Port of WEST HARTLEPOOL

Survey held at West Hartlepool Date, First Survey 24th Sept. 1920 Last Survey 15th Feb. 1921

on the Main Boiler No R. 304. SC. PYLADES. (Number of Visits 17) Tons { Gross Net

Built at By whom built Yard No. When built

made at By whom made Engine No. When made

made at West Hartlepool By whom made Central Marine Engine Works Boiler No. When made 1920

Horse Power Owners Port belonging to

TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel John Spencer & Sons (Letter for Record S.)

Heating Surface of Boilers 1934 ft. Is forced draught fitted Coal or Oil fired

and Description of Boilers One Single ended Working Pressure 180 lbs.

Tested by hydraulic pressure to 360 lbs. Date of test 15.2.20. No. of Certificate 3594 Can each boiler be worked separately

of Firegrate in each Boiler 56.5 ft. No. and Description of safety valves to each boiler 2 Spring-loaded

of each set of valves per boiler { per Rule 13.8 ft. as fitted 16.59 ft. Pressure to which they are adjusted Are they fitted with easing gear

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

Least distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers

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

Least internal dia. of boilers 14' 9" Length 10' - 0" Shell plates: Material Steel Tensile strength 27/30

Thickness 1 1/4" Are the shell plates welded & flanged yes Description of riveting: circ. seams { end D.R. Lap. inter.

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

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

Percentage of strength of longitudinal joint { plate rivets 85.4. 89.5 Working pressure of shell by Rules 184

Percentage of strength of longitudinal joint { plate rivets combined

Thickness of butt straps { outer inner No. and Description of Furnaces in each Boiler 3 Deightons

Material Steel Tensile strength Smallest outside diameter 3' - 10 1/8"

Thickness of plain part { top bottom Thickness of plates { crown 9/16" bottom 1/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 191

plates in steam space: Material Steel Tensile strength Thickness 1 3/32" Pitch of stays 19" x 20"

Are stays secured D. Nuts Working pressure by Rules 185

plates: Material { front Steel Tensile strength Thickness { 1 1/16"

pitch of stay tubes in nests 9" x 9" Pitch across wide water spaces 14 1/4" Working pressure { front 189. back

Boilers to combustion chamber tops: Material Steel Tensile strength Depth and thickness of girder

Centre 8 3/8" x 1 1/4" Length as per Rule 27 5/8" Distance apart 9 7/8" No. and pitch of stays

each Two 9" Working pressure by Rules 183 Combustion chamber plates: Material Steel

Side strength Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 1/16"

Thickness of stays to ditto: Sides 9" x 9 7/8" Back 9" x 9 7/8" Top 9" x 9 7/8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 183 Front plate at bottom: Material Steel Tensile strength

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

Thickness of stays at wide water spaces 14 1/4" x 9 7/8" Are stays fitted with nuts or riveted over

Working Pressure 202 Main stays: Material Steel Tensile strength

meter { At body of stay, or Over threads Area 6.65 sq. in. No. of threads per inch Area supported by each stay 19" x 20"

Working pressure by Rules 182 Screw stays: Material Steel Tensile strength

meter { At turned off part, or Over threads Area 1.79 sq. in. No. of threads per inch Area supported by each stay 19" x 20"

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Working pressure by Rules 181 lb Are the stays drilled at the outer ends ☒ Margin stays: Diameter 1 1/2" { At turned off part, or Over threads

No. of threads per inch 12 Area supported by each stay 3 1/4" Working pressure by Rules 181 lb

Tubes: Material Steel External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 1 1/2" No. of threads per inch 12

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 181 lb Manhole compensation: Size of opening 18"

shell plate Section of compensating ring 1 1/2" No. of rivets and diameter of rivet holes 1 1/2"

Outer row rivet pitch at ends 4" Depth of flange if manhole flanged 1 1/2" Steam Dome: Material Steel

Tensile strength 60,000 Thickness of shell 1 1/2" Description of longitudinal joint Butt joint

Diameter of rivet holes 1 1/2" Pitch of rivets 4" Percentage of strength of joint { Plate 100% Rivets 100%

Internal diameter 36" Working pressure by Rules 181 lb Thickness of crown 1 1/2" No. and diameter of stays 12 Working pressure by Rules 181 lb

How connected to shell By stays Size of doubling plate under dome 1 1/2" Diameter of rivet holes and of rivets in outer row in dome connection to shell 1 1/2"

Type of Superheater Manufacturers of { Tubes Steel Steel castings Steel

Number of elements 12 Material of tubes Steel Internal diameter and thickness of tubes 3 1/4" x 1 1/2"

Material of headers Steel Tensile strength 60,000 Thickness 1 1/2" Can the superheater be shut the boiler be worked separately Yes

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes

Area of each safety valve 1 1/2" Are the safety valves fitted with easing gear Yes Working pressure 181 lb

Rules 181 lb Pressure to which the safety valves are adjusted 181 lb Hydraulic test pressure 225 lb

tubes Steel castings Steel and after assembly in place Yes Are drain cocks or valves to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description, Yes

Dates of Survey { During progress of work in shops - - - 1920. Sept. 24. Oct. 11. Dec. 22. 30. 1921. Jan. 19. Feb. 2. 3. 4. 7. 11. 15. 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 17

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey. The materials and workmanship are good. It is still at this port awaiting delivery.

Survey Fee ... £ 6 : 9 : - When applied for, 29/6/21. 192

Travelling Expenses (if any) £ : : When received, 29/6/21. 192

(Signed) R. D. Philston
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned