

REPORT ON BOILERS.

No. 12934

Received at London Office

1 - JUN 1927

Date of writing Report 31. 5. 1924 When handed in at Local Office 31. 5. 1924 Port of Middlesbrough

No. in Reg. Book. Survey held at Stockton Date, First Survey Apr 22nd 24 Last Survey 24. 5. 1924

on the Spencer Bonecount Waste Heat boiler for m.v. "DORDRECHT" (Number of Visits 8) Tons {Gross Net

Master Built at Amsterdamsche Yssel By whom built La Gennedon. Yard No. 577 When built 1928

Engines made at Rotterdam By whom made Mr. Tyenwood Engine No. 542 When made 1928

Boiler made at Stockton By whom made Riley Bros. Boiler No. 5420 When made 1924

Nominal Horse Power Owners Maatschappij S. Barendrecht Port belonging to Rotterdam

Waste Heat.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Co. of Scotland. (Letter for Record S.)

Total Heating Surface of Boilers 1110 sq. ft. Is forced draught fitted Coal or Oil fired Gas

No. and Description of Boilers One Spencer Bonecount Waste Heat Working Pressure 145 lbs.

Tested by hydraulic pressure to 268 lbs. Date of test 24. 5. 24. No. of Certificate 6543. Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Pair Spring loaded

Area of each set of valves per boiler {per Rule as fitted 5.949 Pressure to which they are adjusted 142 lbs. Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main.

Smallest distance between boilers or uptakes and bunkers or woodwork 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 5'-0" Length 13'-6" Shell plates: Material Steel Tensile strength 28/32.

Thickness 1/2" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end S.R. lap. inter D.R. lap.

Long. seams D.R.D.B.S. Diameter of rivet holes in {circ. seams 1/8" 13/16. Pitch of rivets {2 1/4" 2 3/4"

Percentage of strength of circ. end seams {plate 61.1 rivets 43.8 Percentage of strength of circ. intermediate seam {plate 40.4 rivets 61.9.

Percentage of strength of longitudinal joint {plate 42.9. rivets 106.4. Working pressure of shell by Rules 143.

Thickness of butt straps {outer 1/2" inner 1/2" No. and Description of Furnaces in each Boiler

Material Tensile strength Smallest outside diameter

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

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

End plates in steam space: Material Tensile strength Thickness Pitch of stays

How are stays secured Working pressure by Rules

Tube plates: Material {front back {S. Tensile strength {26/30. Thickness {3/4.

Mean pitch of stay tubes in nests 8 1/4" Pitch across wide water spaces Working pressure {front back {146.

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

at centre Length as per Rule Distance apart No. and pitch of stays

in each Working pressure by Rules Combustion chamber plates: Material

Tensile strength Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top Are stays fitted with nuts or riveted over

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

Thickness Lower back plate: Material Tensile strength Thickness

Pitch of stays at wide water space Are stays fitted with nuts or riveted over

Working Pressure Main stays: Material Tensile strength

Diameter {At body of stay, or Over threads No. of threads per inch Area supported by each stay

Working pressure by Rules Screw stays: Material Tensile strength

Diameter {At turned off part, or Over threads No. of threads per inch Area supported by each stay

Working pressure by Rules ☒ Are the stays drilled at the outer ends ☒ Margin stays: Diameter ☒ At turned off part, or Over threads ☒

No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by Rules ☒

Tubes: Material *steel* External diameter ☒ Plain *1 1/2 6 1 3/8* Thickness ☒ *10 W.G. 1/4"* No. of threads per inch *9*

Pitch of tubes *2 1/2 x 2 1/2* Working pressure by Rules *p. 215 s. 142* Manhole compensation: Size of opening in shell plate *18 x 13* Section of compensating ring *6 x 11/16* No. of rivets and diameter of rivet holes *48 - 13/16*

Outer row rivet pitch at ends *3 1/4* Depth of flange if manhole flanged ☒ Steam Dome: Material

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 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*

RILEY BROS. (BOILERMAKERS) LIMITED.
The foregoing is a correct description,
J. H. Shields SECRETARY Manufacturer.

Dates of Survey ☒ During progress of work in shops *1927 Apr 22-29 May 4-10 12-20 26-27* Are the approved plans of boiler and superheater forwarded herewith *Yes*
☒ while building ☒ During erection on board vessel *---* (If not state date of approval.)

Total No. of visits *8*

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

The materials and workmanship are good.
This boiler has been built under special survey in accordance with the Rules and approved plan.

Survey Fee ... £ *4-8-0* When applied for, **MONTHLY A/c.**

Travelling Expenses (if any) £ : : When received, 192

A. J. Mac
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 21 FEB 1928**

Assigned *See Rot. J. Expt No 17193*