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F.E. 79452

REPORT ON BOILERS.

No. 79304.

Received at London Office 18 JUN 1925

pt. 5a.

When handed in at Local Office 10/6/1925 Port of NEWCASTLE-ON-TYNE.

No. in Survey held at Gellum. on Tyne. Date, First Survey 2nd April/25 Last Survey 16th June 1925

on the Main Boiler for S.S. "WAIPAH" (Number of Visits 13) (Gross Tons 388) (Net Tons 388)

Built at Newcastle on Tyne. By whom built Mathumbeuland. Yard No. 388 When built 1925

Engines made at S. Shields By whom made G. T. Gray & Co Engine No. 613. When made 1925.

Boilers made at Jarvis. on Tyne. By whom made Palmer & Co Ltd. Boiler No. 1051 & 1052. When made 1925

Indicated Horse Power 223. Owners _____ Port belonging to _____

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 4000 sq ft Is forced draught fitted No. Coal or Oil fired Coal

No. and Description of Boilers Two each with 3.5. 25B. Working Pressure 190 lbs

Tested by hydraulic pressure to 335 lbs Date of test 16/6/25 No. of Certificate 9926 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 60.5 sq ft No. and Description of safety valves to each boiler Two, Spring Loaded

Area of each set of valves per boiler per Rule 14.6. Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork 3'-7" Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating 1'-10" Is the bottom of the boiler insulated _____

Largest internal dia. of boilers 14'-6 1/2" Length 10'-6" Shell plates: Material Steel Tensile strength 28 to 32 lbs

Thickness 1 1/4" Are the shell plates welded or flanged No Description of riveting: circ. seams 3 JRL

Long. seams DRJBS Diameter of rivet holes in circ. seams 1 5/8" Pitch of rivets 4"

Percentage of strength of circ. end seams plate rivets 44% Percentage of strength of circ. intermediate seam plate rivets 85.61%

Percentage of strength of longitudinal joint combined 89.35% Working pressure of shell by Rules 192 lbs

Thickness of butt straps outer 1 1/8" No. and Description of Furnaces in each Boiler Three Vertical

Material Steel Tensile strength 26 to 30 lbs Smallest outside diameter 3'-9 3/4"

Length of plain part top - Thickness of plates bottom 3/32" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.e. bottom _____ Working pressure of furnace by Rules 202 lbs

End plates in steam space: Material Steel Tensile strength 26 to 30 lbs Thickness 1 1/2" Pitch of stays 20" x 20"

How are stays secured DN & W. Working pressure by Rules 193 lbs

End plates: Material front Steel Tensile strength 25 to 30 lbs Thickness 1 1/2"

back Steel Working pressure 27" W.B. 25 CENTRES

Mean pitch of stay tubes in nests 10.2" Pitch across wide water spaces 14" x 8 3/4" Working pressure front 195 lbs

Orders to combustion chamber tops: Material Steel Tensile strength 26 to 30 lbs Depth and thickness of girder _____

Centre 8" x 1 1/8" Length as per Rule 29 1/2" Distance apart 9" No. and pitch of stays _____

Each 2 @ 9" Working pressure by Rules 206 lbs Combustion chamber plates: Material Steel

Tensile strength 26 to 30 lbs Thickness: Sides 1/8" Back 1/8" Top 1/8" Bottom 1"

Pitch of stays to ditto: Sides 9" x 9" Back 9" x 9" Top 9" x 9" Are stays fitted with nuts or riveted over Yes

Working pressure by Rules 204 lbs Front plate at bottom: Material Steel Tensile strength 26 to 30 lbs

Thickness 1 1/2" Lower back plate: Material Steel Tensile strength 26 to 30 lbs Thickness 29/32"

Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over Yes

Working Pressure 224 lbs Main stays: Material Steel Tensile strength 28 to 32 lbs

Diameter At body of stay, 3/4" No. of threads per inch 6" Area supported by each stay 400 lbs

Working pressure by Rules 200 lbs Screw stays: Material Steel Tensile strength 26 to 30 lbs

Diameter At turned off part, 1 3/4" No. of threads per inch 9" Area supported by each stay 810"

Working pressure by Rules 224 ¹⁸⁵⁰ 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 14 x 9, 126" Working pressure by Rules 212

Tubes: Material Iron External diameter ^{Plain} 3 1/4" ^{Stay} 3 1/4" Thickness ^{8 W.C.} 1/4" x 5/16" No. of threads per inch 9

Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules 230 Manhole compensation: Size of opening

shell plate 20 x 16 Section of compensating ring 3-0 x 2-8 No. of rivets and diameter of rivet holes 32 @ 1 1/8"

Outer row rivet pitch at ends 9 1/8" Depth of flange if manhole flanged 3 1/2" 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

stays - Inner radius of crown - Working pressure by Rules -

How connected to shell - Size of doubling plate under dome - Diameter of rivet holes and

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

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 casing gear - Working pressure as

Rules - Pressure to which the safety valves are adjusted - Hydraulic test press

tubes - castings - and after assembly in place - Are drain cocks or valves

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 foregoing is a correct description,
Palmer's Shipbuilding & Iron Co., Ltd. Manufact

Dates of Survey ¹⁹²⁵ Apr 2, 7, 16, 22, 29, 30, May 9, 15, 28, June 11, 12, 15, 16. Are the approved plans of boiler and superheater forwarded herewith yes
(If not state date of approval.)

Total No. of visits 18.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special License & the materials & workmanship are good. On completion the boilers were tested by hydraulic pressure to 335 lbs. and found sound & tight. The boilers are stated to be intended for Messrs The Northumberland S. S. No 388.

These boilers have been efficiently installed on the SS. "WAIPAH" and their safety valves adjusted to the working pressure.

Survey Fee £ 26-10-0 When applied for 17 JUN 1925 192
Travelling Expenses (if any) £ : : When received, 27 July 1925 1925 LRP

Harbottle
Engineer Surveyor to Lloyd's Register of Shipping
L. P. P. P.

Committee's Minute WED. 5 AUG 1925
Assigned

