

REPORT ON BOILERS.

No. 82790

Received at London Office

25 MAY 1928

Date of writing Report 21-5-1928 When handed in at Local Office 24-5-1928 Port of Newcastle-on-Tyne

No. in Survey held at Jarrow
Reg. Book.Date, First Survey 30th Decr/1927 Last Survey 16th May 1928

40341 (Sup) on the

S.S. "CARONI"

(Number of Visits —) Gross 3163.81
Tons Net 1671

Master Built at Hebburn By whom built Palmers Co. Ltd. Yard No. 983 When built 1928

Engines made at Jarrow By whom made Palmers Co. Ltd. Engine No. 983 When made 1928

Boilers made at " By whom made Palmers Co. Ltd. Boiler No. 983 When made 1928

Nominal Horse Power 248 Owners Venezuela Gulf Oil Co. Ltd. Port belonging to Maracaibo

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 4808 Is forced draught fitted No ✓ Coal or Oil fired OIL ✓

No. and Description of Boilers Two S.E. CYLINDRICAL MULTITUBULAR Working Pressure 180 LBS. ✓

Tested by hydraulic pressure to 320 LBS. Date of test 25.4.28 No. of Certificate 268-9 Can each boiler be worked separately YES ✓

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Two SPRING LOADED ✓

Area of each set of valves per boiler { per Rule 18.49" as fitted 19.24" Pressure to which they are adjusted 180 LBS Are they fitted with easing gear YES ✓

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

Smallest distance between boilers or uptakes and bunkers or woodwork 1' 6" Is oil fuel carried in the double bottom under boilers No ✓

Smallest distance between shell of boiler and tank top plating 2' 1 1/2" Is the bottom of the boiler insulated YES ✓

Largest internal dia. of boilers 15' 0" Length 11' 6" MEAN Shell plates: Material STEEL ✓ Tensile strength 28-32 TONS

Thickness 1 1/4" Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams { end D.R.L. inter. —

long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 3/8" long. seams 1 1/4" Pitch of rivets { 3.954" 8 1/16" ✓

Percentage of strength of circ. end seams { plate 65.2% rivets 49.6% Percentage of strength of circ. intermediate seam { plate 85.6% rivets 87.1% combined 88.5% Working pressure of shell by Rules 183.9 LBS. 30f. ✓

Thickness of butt straps { outer 3 1/32" inner 1 3/32" No. and Description of Furnaces in each Boiler 3 CORRUGATED, DEIGHTON SECTION

Material STEEL Tensile strength 26-30 TONS ✓ Smallest outside diameter 3' 7 1/8" ✓

Length of plain part { top 10 1/2" bottom 10 1/2" Thickness of plates { crown 9/16" bottom 9/16" Description of longitudinal joint WELD ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 187 LBS. ✓

End plates in steam space: Material STEEL ✓ Tensile strength 26-30 TONS ✓ Thickness 1 1/4" ✓ Pitch of stays 21" x 21" ✓

How are stays secured NUTS & WASHERS ✓ Working pressure by Rules 182 LBS. ✓

Tube plates: Material { front STEEL back " Tensile strength { 26-30 TONS " Thickness { 15/16" 27/32" ✓

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 1' 2" ✓ Working pressure { front 186 LBS. back 202 " ✓

Girders to combustion chamber tops: Material STEEL ✓ Tensile strength 28-32 TONS ✓ Depth and thickness of girder

at centre 10" x 1 3/8" ✓ Length as per Rule 2' 10 1/2" ✓ Distance apart 10" ✓ No. and pitch of stays

in each 3 @ 8 3/4" Working pressure by Rules 182 LBS. ✓ Combustion chamber plates: Material STEEL ✓

Tensile strength 26-30 TONS ✓ Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4" ✓

Pitch of stays to ditto: Sides 8 3/4" x 8 1/4" Back 9" x 8" Top 10" x 8 3/4" Are stays fitted with nuts or riveted over NUTS ON MARGINAL STAYS ✓

Working pressure by Rules 182 LBS. ✓ Front plate at bottom: Material STEEL ✓ Tensile strength 26-30 TONS

Thickness 15/16" ✓ Lower back plate: Material STEEL ✓ Tensile strength 26-30 TONS Thickness 29/32" ✓

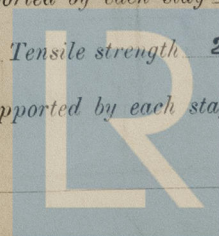
Pitch of stays at wide water space d = 19.5" 14 x 9" ✓ Are stays fitted with nuts or riveted over NUTS ✓

Working Pressure 184 LBS. ✓ Main stays: Material STEEL ✓ Tensile strength 28-32 TONS ✓

Diameter { At body of stay, 3 1/4" ✓ No. of threads per inch 6 ✓ Area supported by each stay 44" ✓

Working pressure by Rules 183 LBS. ✓ Screw stays: Material STEEL ✓ Tensile strength 26-30 TONS ✓

Diameter { At turned off part, 1 5/8" ✓ No. of threads per inch 9 ✓ Area supported by each stay 72.18" ✓



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Working pressure by Rules 211 LBS^a Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, ✓
or Over threads 1 3/4" 2" ✓
No. of threads per inch 9 ✓ Area supported by each stay 99" 123.75" Working pressure by Rules 183 LBS^a 201 LBS^a ✓
Tubes: Material W. IRON ✓ External diameter { Plain 2 1/2" ✓ Thickness { 9 S.L.C. 9/16", 3/8", 7/16" ✓ No. of threads per inch 9 ✓
Pitch of tubes 3 3/4" x 3 3/4" ✓ Working pressure by Rules 230 LBS^a Manhole compensation: Size of opening in
shell plate 20" x 16" ✓ Section of compensating ring 2' 11 1/2" x 2' 8" x 1 1/4" ✓ No. of rivets and diameter of rivet holes 40 @ 1 1/4" ✓
Outer row rivet pitch at ends 8 1/16" ✓ Depth of flange if manhole flanged 4 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 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

Palmers The foregoing is a correct description,

W. Brown Manufacturer.
Manager, Engine Works

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

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Plans not in London.
Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers were built under Special Survey, the materials and workmanship are good.

Survey Fee £ : : When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

Thomas Napier
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 30 MAY 1928

Assigned See Report attached



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