

REPORT ON BOILERS.

No. 74046

Received at London Office

1 - JUN 1949

Date of writing Report 21-5-1949 When handed in at Local Office 30 MAY 1949 19 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 14-1-49 Last Survey 3-5-1949

Bo. Book. SS "WAVE MONARCH" (Number of Visits 22) Gross 8159 Tons Net 4545

19558 on the

Builder Built at GLASGOW By whom built HARLAND & WOLFF LTD. Yard No. When built 1944

Motors Engines made at GLASGOW By whom made BARCLAY CURLE & CO LTD. Engine No. EW2 When made 1944

Boilers made at GREENOCK By whom made J. G. KINCAID & CO LTD Boiler No. P 4168 S 4169 When made 1944

Indicated Horse Power 1496 Owners THE ADMIRALTY Port belonging to LONDON.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record)

Total Heating Surface of Boilers 2080 x 2 Is forced draught fitted YES Coal or Oil fired OIL

Number and Description of Boilers 2 SINGLE ENDED MULTITUBULAR. Working Pressure 180 lbs/A

Tested by hydraulic pressure to 320 lbs/A Date of test No. of Certificate Can each boiler be worked separately YES

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 @ 2 1/4 HIGH LIFT.

Capacity of each set of valves per boiler {per Rule 6.64 A as fitted 4.955 A Pressure to which they are adjusted 180 lbs/A Are they fitted with easing gear YES

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

Smallest distance between boilers or uptakes and bunkers or woodwork 21" Is oil fuel carried in the double bottom under boilers YES

Smallest distance between shell of boiler and tank top plating 22" Is the bottom of the boiler insulated YES

Largest internal dia. of boilers 13'-3 1/2" Length 11'-6" Shell plates: Material STEEL Tensile strength 29-33 TONS/A

Thickness 1 3/32 Are the shell plates welded or flanged YES Description of riveting: circ. seams {end D.R. inter. 3 5/8 Pitch of rivets { 8 3/16

Seams T.R.O.B.S. Diameter of rivet holes in {circ. seams 1 3/16 long. seams 1 3/16 Percentage of strength of circ. end seams {plate 67.2 rivets 43.9 Percentage of strength of circ. intermediate seam {plate 85.5 rivets 92.4 combined 89.5 Working pressure of shell by Rules

Thickness of butt straps {outer 4/8 inner 1" No. and Description of Furnaces in each Boiler 3 CORRUGATED (DEIGHTON)

Material STEEL Tensile strength 26-30 TONS/A Smallest outside diameter 3'-1 1/4"

Thickness of plain part {top 1/2 bottom 1/2 Thickness of plates {crown 1/2 bottom 1/2 Description of longitudinal joint WELDED

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

Plates in steam space: Material STEEL Tensile strength 26-30 TONS/A Thickness 1 5/32 Pitch of stays 19" x 1 1/2"

Are stays secured NUTS INSIDE & OUTSIDE Working pressure by Rules

Front plates: Material {front STEEL back STEEL Tensile strength { 26-30 TONS/A Thickness { 13/16 4/16

Pitch of stay tubes in nests 9 3/8 Pitch across wide water spaces 13 1/2 Working pressure {front 13/16 back 4/16

Stays to combustion chamber tops: Material STEEL Tensile strength 28-32 TONS/A Depth and thickness of girder

Centre (8 3/8 x 13/16) 2 Length as per Rule 2'-8" Distance apart 10" No. and pitch of stays

Each 2 @ 10" Working pressure by Rules

Combustion chamber plates: Material STEEL

Tensile strength 26/30 TONS/A Thickness: Sides 2 1/32 Back 1 1/16 Top 2 3/32 Bottom 2 1/32

Dimensions of stays to ditto: Sides 10" x 8" Back 10" x 7 1/2" Top 10" x 10" Are stays fitted with nuts or riveted over NUTS

Working pressure by Rules

Front plate at bottom: Material STEEL Tensile strength 26-30 TONS/A

Thickness 13/16 Lower back plate: Material STEEL Tensile strength 26-30 TONS/A Thickness 2 1/32

Are stays at wide water space 15" Are stays fitted with nuts or riveted over NUTS

Working Pressure

Main stays: Material STEEL Tensile strength 26-30 TONS/A

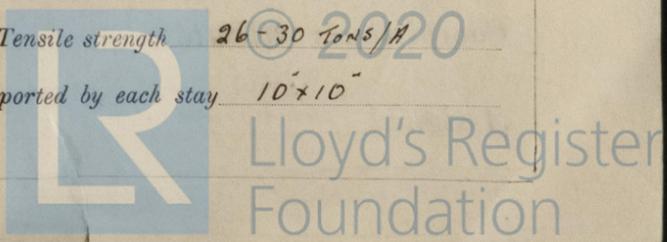
At body of stay, or Over threads 2 7/8 No. of threads per inch 6 THDS/IN Area supported by each stay 19" x 1 1/2"

Working pressure by Rules

Screw stays: Material STEEL Tensile strength 26-30 TONS/A

At turned off part, or Over threads 1 3/4 No. of threads per inch 9 THDS/IN Area supported by each stay 10" x 10"

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Working pressure by Rules Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part... ✓
 No. of threads per inch 9 1405/1N ✓ Area supported by each stay 12 1/2 x 7 1/2 Working pressure by Rules
 Tubes: Material STEEL External diameter { Plain 2 1/2 ✓ Thickness 9 LSG No. of threads per inch 9 1405/1N ✓
 Stay 2 1/2 x 2 3/4 Working pressure by Rules Manhole compensation: Size of opening in
 Pitch of tubes 3 3/4 x 3 3/4 ✓ Working pressure by Rules shell plate 20 1/2 x 16 1/2 ✓ Section of compensating ring 9 x 1 1/8 No. of rivets and diameter of rivet holes 36 @ 1 3/16
 Outer row rivet pitch at ends 8 3/16 ✓ Depth of flange if manhole flanged 3 1/4 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 forgings
 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 casing gear Working pressure as per
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure
 tubes forgings and castings and after assembly in place Are drain cocks
 valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with YES ✓

The foregoing is a correct description,

Manufactured by

Dates of Survey { During progress of work in shops - - }
 while building { During erection on board vessel - - - }
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 Total No. of visits

Is this Boiler a duplicate of a previous case If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boilers were built & installed under British Corporation survey. The boilers have now been opened out & examined in their entirety & found & placed in good condition. Please see Report of herewith.

Survey Fee £ : : } When applied for, 10
 Travelling Expenses (if any) £ : : } When received, 10

J. B. Gray
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute
 Assigned SEE ACCOMPANYING MACHINERY REPORT.

GLASGOW 31 MAY 1949

