

# 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

Port of Glasgow

No. in Survey held at Glasgow

Date, First Survey 14-1-49

Last Survey 3-5-1949

19558 on the S S "WAVE MONARCH"

(Number of Visits 22) Tons { Gross 8159 Net 4545

Built at GLASGOW

By whom built HARLAND & WOLFF LTD.

When built 1944

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. 24168 34169 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.

Number of each set of valves per boiler { per Rule 6.64A as fitted 4.955A

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

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

Description of riveting: circ. seams { end D.R. inter. 3 5/8" 8 3/16"

Seams T.R.O.B.S.

Diameter of rivet holes in { circ. seams 1 3/16 long. seams 1 3/16

Pitch of rivets { 3 5/8" 8 3/16"

Percentage of strength of circ. end seams { plate 64.2 rivets 43.9

Percentage of strength of circ. intermediate seam { plate 85.5 rivets 92.4 combined 89.5

Percentage of strength of longitudinal joint { 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 26-30 TONS/A

Thickness { 13/16" 11/16"

Pitch of stay tubes in nests 9 3/8"

Pitch across wide water spaces 13 1/2"

Working pressure { front 13/16" back 11/16"

Boilers 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 21/32"

Back 11/16"

Top 23/32"

Bottom 21/32"

Pitch 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 24/32"

Pitch of 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

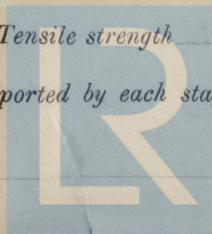
Tensile strength 26-30 TONS/A

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"

004653-004661-0094



Lloyd's Register Foundation



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 1405/14 ✓ Area supported by each stay 12 1/2 x 4 1/2 Working pressure by Rules                       
 Tubes: Material STEEL External diameter { Plain 2 1/2 ✓ Thickness { 9 154 ✓ No. of threads per inch 9 1405/14 ✓  
 Pitch of tubes 3 3/4 x 3 3/4 ✓ Working pressure by Rules                      Manhole compensation: Size of opening in  
 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  
 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

Number of elements                      Material of tubes                      Manufacturers of { Tubes  
 Material of headers                      Tensile strength                      Steel forgings  
 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

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 to be placed in good condition.

Please see Report of herewith.

Survey Fee ... £ : :  
 Travelling Expenses (if any) £ : :

When applied for, 10  
 When received, 10

J.B. Gray

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

SEE ACCOMPANYING MACHINERY REPORT



© 2020

Lloyd's Register Foundation