

REPORT ON BOILERS.

No. 19617

Received at London Office.....

Date of writing Report *1st Jan* 1949 When handed in at Local Office *1st Jan* 1949 Port of *Southampton*

No. in Reg. Book. Survey held at *Portsmouth* Date, First Survey *7th July* Last Survey *27th Sept* 1948

79553 on the *S.S. WAVE KING* (Number of Visits *6*) Gross *8159* Tons Net *4545*

Master..... Built at *GLASGOW* By whom built *HARLAND & WOLFF LTD* Yard No *1222 G* When built *1944*

Engines made at *Newcastle* By whom made *C. A. Parsons & Co. Ltd* Engine No *2574/5* When made *1944*

Boilers made at *Glasgow* By whom made *Kincaids* Boiler No *5799* When made *1944*

Nominal Horse Power *1210* Owners *The Admiralty* Port belonging to *London*

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR DONKEY.~~

Manufacturers of Steel..... (Letter for Record.....)

Total Heating Surface of Boilers *4160 sq ft = 2800* Is forced draught fitted *Yes* Coal or Oil fired *oil*

No. and Description of Boilers *Two - S.E. Main* Working Pressure *180 lbs/sq in*

Tested by hydraulic pressure to *320 lbs/sq in* 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" 1" High Lift*

Area of each set of valves per boiler *per Rule 6.670 sq in* as fitted *7.950 sq in* Pressure to which they are adjusted *180 lbs/sq in* Are they fitted with casing gear *Yes*

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

Smallest distance between boilers *21"* Is oil fuel carried in the *double bottom* under boilers *Yes*

Smallest distance between shell of boiler and tank top plating *21"* Is the bottom of the boiler insulated *Yes*

Largest internal dia. of boilers *15' - 3 1/16"* Length *11' - 6"* Shell plates: Material *Steel* Tensile strength.....

Thickness *1 1/32"* Are the shell plates welded or flanged *No* Description of riveting: circ. seams *end D.R. Lap*

long. seams *TR DRS* Diameter of rivet holes in *circ. seams 1 3/16"* Pitch of rivets *3 5/8"*

Percentage of strength of circ. end seams *plate 67.2* rivets *43.9* Percentage of strength of circ. intermediate seam *plate 85.5* rivets.....

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 7/8"* *inner 1"* No. and Description of Furnaces in each Boiler *Three Dighton corrugated*

Material..... Tensile strength..... Smallest outside diameter *37 1/4"*

Length of plain part *top 1/2"* *bottom 1/2"* Thickness of plates *top 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.....

End plates in steam space: Material..... Tensile strength..... Thickness *1 5/32"* Pitch of stays *19" & 17 1/2"*

How are stays secured *Double nuts* Working pressure by Rules.....

Tube plates: Material *front 13/16"* *back 1 1/16"* Tensile strength..... Thickness *13/16"* *1 1/16"*

Mean pitch of stay tubes in nests *11 1/4" & 7 1/4"* Pitch across wide water spaces *13 1/2"* Working pressure *front 13/16"* *back 1 1/16"*

Girders to combustion chamber tops: Material..... Tensile strength..... Depth and thickness of girder at centre *8 3/8" x (1 5/8") = 2 x 1 3/8"* Length as per Rule *32"* Distance apart *10"* No. and pitch of stays in each *2 @ 10"* Working pressure by Rules.....

Tensile strength..... Thickness: Sides *2 1/32"* Back *1 1/16"* Top *2 3/32"* Bottom *2 1/32"*

Pitch of stays to ditto: Sides *10" & 8"* Back *10 1/2" & 7 1/2"* Top *10" & 10"* Are stays fitted with nuts or riveted over *margin stays riveted each end other - c.c. only*

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

Thickness *13/16"* Lower back plate: Material..... Tensile strength..... Thickness *27/32"*

Pitch of stays at wide water space *15 1/2" & 7 1/2"* Are stays fitted with nuts or riveted over *nuts*

Working pressure..... Main stays: Material..... Tensile strength.....

Diameter *At body of stay 2 7/8"* *Over threads 2 1/2"* No. of threads per inch *6* Area supported by each stay.....

Working pressure by Rules..... Screw stays: Material..... Tensile strength.....

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

Working pressure by Rules..... Are the stays drilled at the outer ends *No* ✓ Margin stays: Diameter { At turned off part..... *17/8* ✓
or Over threads.....
No. of threads per inch *9* ✓ Area supported by each stay..... Working pressure by Rules.....
Tubes: Material *Steel* External diameter { Plain..... *2 1/2* ✓ Thickness { *9 w.g. 3/8 5/16* No. of threads per inch *9* ✓
Stay..... *2 1/2* ✓
Pitch of tubes..... *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 *None* ✓
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 *None*

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 easing 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 or
valves fitted to free the superheater from water where necessary.....

Have all the requirements of Sections 15 to 23 inclusive for boilers been complied with *Yes* ✓

The foregoing is a correct description,

Manufacturer.

Dates { During progress of { Are the approved plans of boiler and superheater forwarded herewith
of Survey { work in shops - - } (If not state date of approval.)
while { During erection on {
building { board vessel - - - }
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.)

These Boilers were built and installed under British Lloyds Survey. They have now been examined throughout and found to be in good order. Please see Report 9 herewith.

Survey Fee £ : : } When applied for.....19.....
Travelling Expenses (if any) £ : : } When received.....19.....

H. B. Rogers.

Engineer Surveyor to Lloyd's Register of Shipping.

FEB. 11 FEB 1949

Committee's Minute.....

Assigned.....

See minutes on file



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Foundation