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REPORT ON BOILERS.

No. 24471

Received at London Office. 22 AUG 1951

Date of writing Report 11th Aug. 1951. When handed in at Local Office 14th Aug. 1951. Port of GREENOCKNo. in Reg. Book. Survey held at GREENOCK Date, First Survey 7th FEBRUARY 1949. Last Survey 23rd JULY 1951

on the S/S JAAPRATAP (Number of Visits...✓) Tons } Gross... Net...

Master. Built at VIZAGAPATAM By whom built SCINDIA STEAM NAV. CO L^d Yard No. When builtEngines made at GREENOCK By whom made JOHN G. KINCAID & CO L^d Engine No. 795 When made 1951

Boilers made at do By whom made do Boiler No. 795 When made 1951

Nominal Horse Power 524 Owners SCINDIA STEAM NAV. CO L^d Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel COLVILLES L^d (Letter for Record...)

Total Heating Surface of Boilers 7563 Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers 3 SE cylindrical Working Pressure 220 ✓

Tested by hydraulic pressure to 380 Date of test 1-6-51 8-6-51 20-6-51 No. of Certificate 2643 2646 2648 Can each boiler be worked separately Yes ✓

Area of Firegrate in each Boiler 63.25 No. and Description of safety valves to each boiler 2 1/4" GM double opening 14L

Area of each set of valves per boiler per Rule 6.705 as fitted 7.96 ✓ Pressure to which they are adjusted ✓ 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 ✓ Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated ✓

Largest internal dia. of boilers 14'-10 9/16" ✓ Length 11'-6" ✓ Shell plates: Material S Tensile strength 29 3/32 tons ✓

Thickness 1 7/16" ✓ Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams end DR inter ✓

long. seams T.R.D.B.S. Diameter of rivet holes in circ. seams 1 5/16" ✓ long. seams 1 7/16" ✓ Pitch of rivets 4.158" ✓ 9.8125" ✓

Percentage of strength of circ. end seams plate 64.6 ✓ rivets 44.89 ✓ Percentage of strength of circ. intermediate seam plate 85.3 ✓ rivets 85.9 ✓

Percentage of strength of longitudinal joint plate 85.3 ✓ rivets 85.9 ✓ combined 87.78 ✓ Working pressure of shell by Rules

Thickness of butt straps outer 1 3/32" ✓ inner 1 7/32" ✓ No. and Description of Furnaces in each Boiler Three Morrison corrugated

Material S Tensile strength 24/30 tons ✓ Smallest outside diameter 3'-9 1/2" ✓

Length of plain part top ✓ bottom ✓ Thickness of plates crown 3/4" ✓ bottom 3/4" ✓ Description of longitudinal joint Weld ✓

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

End plates in steam space: Material S Tensile strength 24/30 tons ✓ Thickness 1 1/32" ✓ Pitch of stays 21 x 18 3/4" ✓

How are stays secured DN with loose washers Working pressure by Rules

Tube plates: Material front S back S Tensile strength 24/30 tons ✓ Thickness 7/8" ✓ 1 1/16" ✓

Mean pitch of stay tubes in nests 8.43" ✓ Pitch across wide water spaces 13 1/2" ✓ Working pressure front back

Girders to combustion chamber tops: Material S Tensile strength 29 3/32 tons ✓ Depth and thickness of girder

at centre 10 x 1 1/2" ✓ Length as per Rule 2'-9 5/8" ✓ Distance apart 8 1/4" ✓ No. and pitch of stays

in each Three 28" Working pressure by Rules Combustion chamber plates: Material S

Tensile strength 24/30 tons ✓ Thickness: Sides 1 1/16" ✓ Back 1 1/16" ✓ Top 1 1/16" ✓ Bottom 13/16" ✓

Pitch of stays to ditto: Sides 8 x 8 1/4" ✓ Back 8 x 9" ✓ Top 8 x 8 1/4" ✓ Are stays fitted with nuts or riveted over Nuts ✓ except on shell

Working pressure by Rules Front plate at bottom: Material S Tensile strength 24/30 tons ✓

Thickness 7/8" ✓ Lower back plate: Material S Tensile strength 24/30 tons ✓ Thickness 7/8" ✓

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

Working pressure Main stays: Material S Tensile strength 28 3/32 tons ✓

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

Working pressure by Rules Screw stays: Material What iron ✓ Tensile strength 21.5 tons ✓

Diameter At turned off part 1 5/8" & 1 3/4" ✓ or Over threads No. of threads per inch 9 Area supported by each stay

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Working pressure by Rules..... Are the stays drilled at the outer ends..... No..... Margin stays: Diameter { At turned off part..... 1 7/8" 12" or Over threads.....
No. of threads per inch..... 9..... Area supported by each stay..... Working pressure by Rules.....
Tubes: Material *Hot Rolled welded steel* External diameter { Plain..... 2 1/2" Thickness { 3/16" 3/8" 7/16" No. of threads per inch..... 9
Pitch of tubes..... 3 1/4" x 3 3/8" Working pressure by Rules..... Manhole compensation: Size of opening in shell plate.....
Section of compensating ring..... 2' 8 1/2" x 3' 1" x 1 1/2" No. of rivets and diameter of rivet holes..... 42 - 1 1/2"
Outer row rivet pitch at ends..... 10" Depth of flange if manhole flanged..... *McNeil type door* 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 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 14 to 22 inclusive for boilers been complied with.....

For JOHN G. KINCAID & COY., LIMITED.
The foregoing is a correct description.

A. H. Humphreys Chief Draughtsman. Manufacturer.

Dates of Survey while building { During progress of work in shops - - - During erection on board vessel - - -

SEE MACHINERY REPORT

Are the approved plans of boiler and superheater forwarded herewith..... Yes (If not state date of approval.)

Total No. of visits.....

Is this Boiler a duplicate of a previous case..... Yes

If so, state Vessel's name and Report No. *GRK FE N° 24395*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.).....

These Boilers have been constructed in accordance with the Rules & approved plans. The materials & workmanship are sound & good. They have been shipped to Vizagapatnam to be installed in the vessel. Please see Greenock FE of N° 24471 on Main engine for recommendations.

Survey Fee £

Travelling Expenses (if any) £

When applied for..... 19.....

When received..... 19.....

Charles J. Hunter

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... GLASGOW 21 AUG 1951

FRI. 28 NOV 1952

Assigned..... ACCOMPANYING MACHINERY REPORT

Su F.E. mclay rpt. Cal 15229

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