

# REPORT ON BOILERS.

No. 23430.

Received at London Office.

18<sup>th</sup> AUG. 1948. When handed in at Local Office 20<sup>th</sup> AUGUST 1948.

Port of GREENOCK

Survey held at GREENOCK

Date, First Survey 13<sup>th</sup> NOVEMBER 1947. Last Survey 12<sup>th</sup> AUGUST 1948.

(Number of Visits 17.)

Tons

on the

Built at VEZACAPATAM

By whom built SCINDIA STEAMSHIP CO Yard No. 16109 When built

PAISLEY

By whom made MACKIE & BAXTER

Engine No. 1380 When made 1948

GREENOCK

By whom made JOHN C. KINCAID & CO LTD

Boiler No. 783 When made 1948

nominal Horse Power

Owners SCINDIA STEAMSHIP CO

Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

COLVILLE L<sup>TD</sup>

(Letter for Record)

Total Heating Surface of Boilers

1470

Is forced draught fitted

No

Coal or Oil fired Coal

No. and Description of Boilers

One cylindrical single end

Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs

Date of test 8-6-48

No. of Certificate 2489

Can each boiler be worked separately

Area of Firegrate in each Boiler

54.4

No. and Description of safety valves to each boiler

Two improved high lift

Area of each set of valves per boiler

per Rule 4.7115  
as fitted 4.82

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

13'0"

Length 10'-6"

Shell plates: Material S

Tensile strength 29/33 tons

Thickness 1 1/8"

Are the shell plates welded or flanged No.

Description of riveting: circ. seams

Long. seams

TR DBS

Diameter of rivet holes in

circ. seams 1 3/16"  
long. seams 1 1/8"

Pitch of rivets

3.5244  
7.218

Percentage of strength of circ. end seams

plate 66.3  
rivets 46.9  
plate 85.25  
rivets 85.89  
combined 87.73

Percentage of strength of circ. intermediate seam

Working pressure of shell by Rules 184.5 lbs

Percentage of strength of longitudinal joint

Thickest of butt straps

outer 13/16"  
inner 15/16"

No. and Description of Furnaces in each Boiler

Three Brighton corrugated

Material S

Tensile strength 26/30 tons

Smallest outside diameter 3'-4"

Length of plain part

top  
bottom

Thickness of plates

crown 1/2"  
bottom

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 26/30 tons

Thickness 13/16" Pitch of stays 19" x 18 1/2"

How are stays secured

DN

Working pressure by Rules

Tube plates:

Material front S  
back

Tensile strength 26/30 tons

Thickness 7/8"

Mean pitch of stay tubes in nests

10.281"

Pitch across wide water spaces 14 1/4"

Working pressure

Girders to combustion chamber tops:

Material S

Tensile strength 29/33 tons

Depth and thickness of girder

at centre 7 3/4" x 1 1/2"

Length as per Rule 2'-3 19/32"

Distance apart 10 1/2"

No. and pitch of stays

in each two @ 8 5/8"

Working pressure by Rules

Combustion chamber plates: Material S

Tensile strength 26/30 tons

Thickness: Sides 23/32"

Back 2 1/2"

Top 23/32"

Bottom 15/16"

Pitch of stays to ditto:

Sides 8 5/8" x 10"

Back 10" x 8"

Top 10 1/2" x 8 5/8"

Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules

Front plate at bottom: Material S

Tensile strength 26/30 tons

Thickness 7/8"

Lower back plate: Material S

Tensile strength 26/30 tons

Thickness 7/8"

Pitch of stays at wide water space 14" x 10"

Are stays fitted with nuts or riveted over Nuts

Working pressure

Main stays: Material S

Tensile strength 28/32 tons

Diameter

At body of stay 3"  
Over threads

No. of threads per inch 6

Area supported by each stay

Working pressure by Rules

Screw stays: Material S

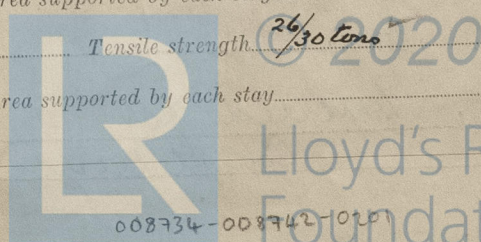
Tensile strength 26/30 tons

Diameter

At turned off part 1 5/8" x 1 3/4"  
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..... 17/8  
Over threads.....  
No. of threads per inch 9 Area supported by each stay..... Working pressure by Rules.....  
Tubes: Material Hot rolled steel External diameter { Plain..... 3 1/4  
Stay..... 3 1/4 Thickness { 9/32 11/32 No. of threads per inch 9  
Pitch of tubes 4 1/2 x 4 3/8 Working pressure by Rules..... Manhole compensation: Size of opening  
shell plate 16 1/2 x 12 1/2 Section of compensating ring 2' 10 1/4 x 2' 6 1/4 x 1 3/8 No. of rivets and diameter of rivet holes 42 - 13/16  
Outer row rivet pitch at ends 9" Depth of flange if manhole flanged McNeill 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  
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  
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.....

The foregoing is a correct description,  
For JOHN G. KINCAID & CO. LTD.  
J. Conway  
Chief Draughtsman

Dates of Survey while building { During progress of work in shops - - - (1947) Nov. 13-20. DEC. 2-5-30. (1948) JAN. 13-21.  
FEB. 4-5-15. MAR. 5-10. 19-24. MAY 19. JUNE 8.  
During erection on board vessel - - -  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 4/10  
Total No. of visits 14

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
This boiler has been constructed under Special survey in accordance with the Rules & approved plans. The materials & workmanship are sound & good. It has now been shipped to India to be installed in a vessel being built by The Scindia Steamship Co. at Vizagapatam.

Survey Fee ... .. £ 19 : 12 :  
Travelling Expenses (if any) £ : :  
When applied for 20th AUG. 1948.  
When received ..... 19.....

Charles J. Vanden  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... GLASGOW 24 AUG 1948 FRI, 12 AUG 1948

Assigned Referred for Completion See F.E. Mutchy & Co.