

REPORT ON BOILERS.

No. 20581.

Received at London Office

JUN 15 1938

Date of writing Report

11th June, 1938

When handed in at Local Office

11th June, 1938

Port of

Greenock

No. in
Reg. Book.

Survey held at

Greenock

Date, First Survey

24th August, 1937

Last Survey

10th June, 1938

on the

S/S

EL. HIND

(Number of Visits)

✓

Gross

5318.86

Tons

Net

3224.96

Master

Built at

P. Glasgow

By whom built

Littlejohn & Co. Ltd.

Yard No.

912

When built

1938

Engines made at

Greenock

By whom made

John E. Macdonald & Co. Ltd.

Engine No.

698

When made

1938

Boilers made at

ditto

By whom made

ditto

Boiler No.

698

When made

1938

Nominal Horse Power

Owners

Sciindia S. & C. Ltd.

Port belonging to

Bombay

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

Manufacturers of Steel

Bolwell & Scott Ltd. D. & C. Co.

(Letter for Record)

R

Total Heating Surface of Boilers

4563 sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

3 Single Ended

Working Pressure

220

Tested by hydraulic pressure to

380

Date of test

1.3.38

No. of Certificate

2143

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

64.4 sq. ft.

No. and Description of safety valves to each boiler

one Double Seated

Area of each set of valves per boiler

per Rule

13.4 sq. ft.

as fitted

Pressure to which they are adjusted

225

Are they fitted with easing gear

Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

None fitted

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-9"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

14'-10 9/16"

Length

11'-6"

Shell plates: Material

S

Tensile strength

29.33

Thickness

1 7/16"

Are the shell plates welded or flanged

Yes

Description of riveting: circ. seams

end

DR

long. seams

TR. D. S.

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 7/16"

Pitch of rivets

4.158"

Percentage of strength of circ. end seams

plate

64.6

rivets

44.8

Percentage of strength of circ. intermediate seam

plate

85.3

Percentage of strength of longitudinal joint

plate

85.9

rivets

84.48

Working pressure of shell by Rules

221

Thickness of butt straps

outer

1 3/32"

inner

1 7/32"

No. and Description of Furnaces in each Boiler

3 Morrison

Material

S

Tensile strength

26.30

Smallest outside diameter

3'-9 1/2"

Length of plain part

top

bottom

Thickness of plates

crown

3/4"

Description of longitudinal joint

weld

Dimensions of stiffening rings on furnace or c.c. bottom

Yes

Working pressure of furnace by Rules

243

End plates in steam space: Material

S

Tensile strength

26.30

Thickness

1 1/32"

Pitch of stays

21.18 3/4"

How are stays secured

D.N. Weston

Working pressure by Rules

222

Tube plates: Material

front

back

S

Tensile strength

26.30

Thickness

1 1/16"

Mean pitch of stay tubes in nests

8'-5"

Pitch across wide water spaces

13'-12"

Working pressure

front

241

Girders to combustion chamber tops: Material

S

Tensile strength

29.33

Depth and thickness of girder

at centre

10'-3 1/4" (2)

Length as per Rule

2.9 5/8"

Distance apart

8'-4"

No. and pitch of stays

in each

3 at 8"

Working pressure by Rules

230

Combustion chamber plates: Material

S

Tensile strength

26.30

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

13/16"

Pitch of stays to ditto: Sides

8'-8 1/4"

Back

8'-9"

Top

8'-8 1/4"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

229

Front plate at bottom: Material

S

Tensile strength

26.30

Thickness

7/8"

Lower back plate: Material

S

Tensile strength

26.30

Thickness

7/8"

Pitch of stays at wide water space

14"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

226

Main stays: Material

S

Tensile strength

28.32

Diameter

At body of stay,

3 1/4"

No. of threads per inch

6

Area supported by each stay

393.75 sq. in.

Working pressure by Rules

236

Screw stays: Material

Iron

Tensile strength

21 1/2 tons

Diameter

At turned off part,

1 3/4"

No. of threads per inch

9

Area supported by each stay

420 sq. in.

Working pressure by Rules **248** Are the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, **17/8" x 2"** or Over threads }
No. of threads per inch **9** Area supported by each stay **96 3/4 #** Working pressure by Rules **221**
Tubes: Material **Iron** External diameter { Plain } **2 1/2** Thickness { **7/16" 3/8" 7/16"** } No. of threads per inch **9**
Pitch of tubes **3 7/8" 3 1/16"** Working pressure by Rules **241** Manhole compensation: Size of opening in shell plate **16 1/2" x 20 1/2"** Section of compensating ring **3-1 1/2" x 28 1/2" x 1 1/32"** No. of rivets and diameter of rivet holes **42 at 1 1/2" x 3/32"**
Outer row rivet pitch at ends **10"** Depth of flange if manhole flanged **3 1/2"** 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 **Yes**

The foregoing is a correct description,
For JOHN G. KINCAID & CO. LIMITED.
W. G. Kincaid Director. Manufacturer.

Dates of Survey { During progress of work in shops - -)
while building { 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. **S/S "Jalakrishna" Enk. Rep. No. 20484**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been built under Special Survey in accordance with the approved plans & the workmanship & material are of good quality. This Report accompanies that of the Machinery**

Charged on Machinery
Survey : When applied for, 19
Travelling Expenses (if any) £ : When received, 19

W. G. Kincaid
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 14 JUN 1938**
Assigned **SEE ACCOMPANYING MACHINERY REPORT.**