

## REPORT ON BOILERS.

No. 67107

Received at London Office

Date of writing Report

19

When handed in at Local Office

24. 5. 1943

Port of

Glasgow

No. in Survey held at

Glasgow

Reg. Book.

Date, First Survey

1st Dec 1941

Last Survey

18th May 1943

1943

(Number of Visits

86)

Gross

Tons

Net

on the

M/V.

"SOCOTRA"

Built at

Glasgow

By whom built

Barclay Curle &amp; Co. Ltd.

Yard No.

691

When built

1943

Engines made at

do.

By whom made

do.

Engine No.

691

When made

1943

Boilers made at

do.

By whom made

do.

Boiler No.

691

When made

1943

Nominal Horse Power

1721

Owners

R. O. Steam Nav. Co. Ltd.

Port belonging to

London

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Cottrill, Ltd.

(Letter for Record

S

Total Heating Surface of Boilers

2727 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

One Single-ended

Working Pressure

120 lb.

Tested by hydraulic pressure to

230 lb.

Date of test

26-10-42

No. of Certificate

21231

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

3" I.H.L. donkey

Area of each set of valves per boiler

per Rule 12.6 sq ft

as fitted

14.12 sq ft

Pressure to which they are adjusted

120 lb.

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

well clear

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

Yes

Largest internal dia. of boilers

15' 3"

Length

11' 9"

Shell plates: Material

S

Tensile strength

29/33 tons

Thickness

27/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

inter.

long. seams

DBS TR

Diameter of rivet holes in

circ. seams

1"

long. seams

15/16"

Pitch of rivets

3.28"

Percentage of strength of circ. end seams

plate

69.5

rivets

44.8

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.9

rivets

91.1

combined

90.1

Thickness of butt straps

outer

11/16"

inner

13/16"

No. and Description of Furnaces in each Boiler

3 Deighton

Material

S

Tensile strength

26/30 tons

Smallest outside diameter

44 1/4"

Length of plain part

top

bottom

Thickness of plates

crown

13/32"

bottom

Description of longitudinal joint

held

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

End plates in steam space: Material

S

Tensile strength

26/30 tons

Thickness

1 3/32"

Pitch of stays

21" x 2 1/2"

How are stays secured

DH

Tube plates: Material

front

S

back

Tensile strength

26/30 tons

Thickness

11/16"

11/16"

Mean pitch of stay tubes in nests

17.94"

Pitch across wide water spaces

13 1/2"

Girders to combustion chamber tops: Material

S

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

2 @ 8 1/2" x 11/16"

Length as per Rule

37 23/32"

Distance apart

4 3/8" + 10"

No. and pitch of stays

in each

2 @ 12"

Combustion chamber plates: Material

S

Tensile strength

26/30 tons

Thickness: Sides

21/32"

Back

19/32"

Top

21/32"

Bottom

21/32"

Pitch of stays to ditto: Sides

12" x 10"

Back

10" x 10"

Top

12" x 7 3/8"

and 12 x 10

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

S

Tensile strength

26/30 tons

Thickness

11/16"

Lower back plate: Material

S

Tensile strength

26/30 tons

Thickness

21/32"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

S

Tensile strength

28/32 tons

Diameter

At body of stay,

or

2 5/8"

No. of threads per inch

6

Screw stays: Material

S

Tensile strength

26/30 tons

Diameter

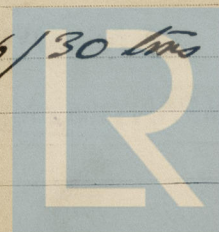
At turned off part,

or

1 1/2"

No. of threads per inch

9



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Are the stays drilled at the outer ends no

Margin stays: Diameter { At turned off part, 1 7/8" + 1 3/4"  
or  
Over threads

No. of threads per inch 9

Tubes: Material S External diameter { Plain 2 1/2"  
Stay 2 1/2" Thickness { 11 W 4  
1/4" + 5/16" No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4" Manhole compensation: Size of opening in

shell plate 20" x 16" Section of compensating ring 9 1/2" x 27/32" No. of rivets and diameter of rivet holes 40 @ 1 1/8"

Outer row rivet pitch at ends 7 1/2" 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  
Rivets

Internal diameter Thickness of crown No. and diameter of

stays Inner radius of crown

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

Pressure to which the safety valves are adjusted

tubes forgings and castings and after assembly in place Hydraulic test pressure:

valves fitted to free the superheater from water where necessary Are drain cocks or

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with



The foregoing is a correct description,

Alexander Macneil Manufacturer.

Dates of Survey { During progress of work in shops - -  
while building { During erection on board vessel - - -  
See attached 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 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 built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. It has been satisfactorily installed in the vessel and the safety valves have been adjusted to the working pressure.

Survey Fee ... £ 18 : 4 : - When applied for, 25 MAY 1943  
Travelling Expenses (if any) £ : : When received, 19

A. J. Brown  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 25 MAY 1943

Assigned SEE ACCOMPANYING MACHINERY REPORT



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