

## REPORT ON BOILERS.

No. 19244

Received at London Office 2 OCT 1930

Date of writing Report 3. 7. 30

When handed in at Local Office 26<sup>th</sup> SEPTEMBER 1930

Port of Greenock

No. in Reg. Book. 70361

Survey held at

Greenock

Date, First Survey 14<sup>th</sup> JANUARY 1930Last Survey 26<sup>th</sup> SEPTEMBER 1930

(Number of Visits ✓)

Gross

Tons

Net

Master

Built at

Glasgow

By whom built

Blythwood 83<sup>rd</sup> 1909

Yard No.

29

When built

1930

Engines made at

Greenock

By whom made

John & K. Caird 10<sup>th</sup> 1930

Engine No.

1154

When made

1930

Boilers made at

ditto

By whom made

ditto

Boiler No.

1154

When made

1930

Nominal Horse Power

Owners

Lobilos Oil Fields L<sup>d</sup>

Port belonging to

London

MULTITUBULAR BOILERS—~~MAIN~~, AUXILIARY, ~~HEATING~~.

Manufacturers of Steel

Wickhams &amp; Beagham Union Metallurgical &amp; Engineering Co. Ltd.

For Record

S

Total Heating Surface of Boilers

1220.0 sq ft

Is draught fitted

Yes

Oil fired

Oil

No. and Description of Boilers

one single ended

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

30-6-30

No. of Certificate

1954

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

Oil Fuel

No. and Description of safety valves to each boiler

Cochran's Improved High Lift

Area of each set of valves per boiler

per Rule 4.696 sq ft

Pressure to which they are adjusted

185

Are they fitted with easing gear

Yes

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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2.0

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

21"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

11' 2 1/16"

Length

10-6"

Shell plates: Material

S

Tensile strength

26.32

Thickness

15 1/16"

Are the shell plates welded or flanged

Yes

Description of riveting: circ. seams

end

DR

long. seams

T R 1 D B S

Diameter of rivet holes in

circ. seams

1 1/8"

Pitch of rivets

3 1/8"

Percentage of strength of circ. end seams

plate

70.8

Percentage of strength of circ. intermediate seam

plate

85.7

Percentage of strength of longitudinal joint

plate

82.4

Working pressure of shell by Rules

182

Thickness of butt straps

outer

23/32"

inner

27/32"

No. and Description of Furnaces in each Boiler

2 Dugltons

Material

S

Tensile strength

26.30

Smallest outside diameter

3' 0 15/16"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

182

End plates in steam space: Material

S

Tensile strength

26.30

Thickness

1 1/32"

Pitch of stays

16 1/2" x 16 1/2"

How are stays secured

DN

Working pressure by Rules

182

Tube plates: Material

front

back

S

Tensile strength

26.30

Thickness

23/32"

Mean pitch of stay tubes in nests

9.78"

Pitch across wide water spaces

14"

Working pressure

front

184

back

192

Girders to combustion chamber tops: Material

S

Tensile strength

26.32

Depth and thickness of girder

at centre

8 1/4" x 3/4" (2)

Length as per Rule

2' 4.62

Distance apart

8"

No. and pitch of stays

in each

2 at 10"

Working pressure by Rules

183

Combustion chamber plates: Material

S

Tensile strength

26.30

Thickness: Sides

2 1/32"

Back

2 1/32"

Top

2 1/32"

Bottom

2 1/32"

Pitch of stays to ditto: Sides

8 1/4" x 10"

Back

9 1/4" x 14"

Top

8 1/4" x 10"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

180

Front plate at bottom: Material

S

Tensile strength

26.30

Thickness

1"

Lower back plate: Material

S

Tensile strength

26.30

Thickness

25/32"

Pitch of stays at wide water space

13 3/4"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

183

Main stays: Material

S

Tensile strength

28.32

Diameter

At body of stay,

or

Over threads

2 5/8"

No. of threads per inch

6"

Area supported by each stay

273.5 sq in

Working pressure by Rules

187

Screw stays: Material

S

Tensile strength

26.30

Diameter

At turned off part,

or

Over threads

1 5/8"

No. of threads per inch

9

Area supported by each stay

80 sq in



Working pressure by Rules 190 Are the stays drilled at the outer ends 970 Margin stays: Diameter 1 3/4"  
 No. of threads per inch 9 Area supported by each stay 103.5" Working pressure by Rules 214  
 Tubes: Material 9WG External diameter 3" Thickness 9WG 1/4 3/8 5/16 No. of threads per inch 9  
 Pitch of tubes H 1 1/4 x H 3/16 Working pressure by Rules 182 Manhole compensation: Size of opening in  
 shell plate 20" x 16" Section of compensating ring 2'8 3/4 x 2'4 3/4 x 1 1/2" No. of rivets and diameter of rivet holes 38 at 1 1/8"  
 Outer row rivet pitch at ends 4 1/2" 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  
 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, 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

The foregoing is a correct description,  
 For JOHN G. KIRKALD & CO. LIMITED.  
 Robert Green 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 (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. (138) Fäthelsultan Enk Rpt 19126

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

This Boiler has been built under Special Survey in accordance with the approved plan & the workmanship & material are of good quality. It is now securely fitted on board. This Report accords with the Report of the Machinery.

Survey Fee charged on Machinery  
 Travelling Expenses (if any)

When applied for, 19  
 When received, 19

W. Gordon Muir

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1 OCT 1930

Assigned See accompanying report



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