

## 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 Survey held at

Reg. Book.

Greenock

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

on the

M/S El "Mile"

(Number of Visits)

Gross 8088

Net 4930

Master

Built at

Glasgow

By whom built

Blythwood &amp; Co

Yard No.

29

When built

1930

Engines made at

Greenock

By whom made

John & Mercand L<sup>d</sup>

Engine No.

1164

When made

1930

Boilers made at

ditto

By whom made

ditto

Boiler No.

1164

When made

1930

Nominal Horse Power

Owners

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

Port belonging to

London.

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY

Manufacturers of Steel

Wulfsberg & Co, Glasgow  
Usius Metallurgische, & Gutehoffnungshutte

(Letter for Record)

S

Total Heating Surface of Boilers

1680

Is forced draught fitted

Yes

Oil fired

Yes

No. and Description of Boilers

see single ended.

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

30/6/30

No. of Certificate

1953

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

6.462

No. and Description of safety valves to each boiler

Cochran high lift (improved)

Area of each set of valves per boiler

as fitted

9.81

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

-

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

2.1

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

12.10 3/32"

Length

11.0

Shell plates: Material

S

Tensile strength

29.33

Thickness

1 1/32"

Are the shell plates welded or flanged

-

Description of riveting: circ. seams

end

inter.

long. seams

TR.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/32"

Pitch of rivets

3.025

Percentage of strength of circ. end seams

plate

65.9

rivets

42.4

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.5

rivets

88

Working pressure of shell by Rules

180.5

Thickness of butt straps

outer

13/16"

inner

15/16"

No. and Description of Furnaces in each Boiler

3 Daigltons

Material

S

Tensile strength

26.30

Smallest outside diameter

36 30/32"

Length of plain part

top

bottom

Thickness of plates

circ. seams

bottom

15/32"

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

1.3/32"

Pitch of stays

18 16 3/4"

How are stays secured

D.N.

Working pressure by Rules

180

Tube plates: Material

front

back

S

Tensile strength

26.30

Thickness

25/32"

Mean pitch of stay tubes in nests

9.79

Pitch across wide water spaces

13 3/4"

Working pressure

front

back

181

Girders to combustion chamber tops: Material

S

Tensile strength

28.32

Depth and thickness of girder

at centre

9 1/2 x 3 1/4 (2)

Length as per Rule

3.0 5/8"

Distance apart

8 1/4"

No. and pitch of stays

in each

3 at 8 1/16"

Working pressure by Rules

181

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

9 x 9 1/4"

Back

8 5/8 x 9 1/2"

Top

8 1/4 x 8 1/16"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

182

Front plate at bottom: Material

S

Tensile strength

26.30

Thickness

3 1/32"

Lower back plate: Material

S

Tensile strength

26.30

Thickness

25 1/32"

Pitch of stays at wide water space

13 1/2"

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 3/4"

No. of threads per inch

6

Area supported by each stay

306"

Working pressure by Rules

182

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

83 25 1/2"



Working pressure by Rules **204** Are the stays drilled at the outer ends **90** Margin stays: Diameter { At turned off part, **13/4 x 2"**  
or  
Over threads **182**  
No. of threads per inch **9** Area supported by each stay **99:18"** Working pressure by Rules **182**  
Tubes: Material **Iron** External diameter { Plain **3"** Thickness **1/4 - 5/16"** No. of threads per inch **9**  
Pitch of tubes **4 3/16" & 4 1/4"** Working pressure by Rules **185** Manhole compensation: Size of opening in  
shell plate **16" x 12"** Section of compensating ring **2.10 1/2 x 2.6 1/2 x 1 1/8"** No. of rivets and diameter of rivet holes **36 at 1 1/4"**  
Outer row rivet pitch at ends **8 3/16"** 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 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, 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. Kincaid & Co. Ltd.  
Director. Manufacturer.

Dates of Survey while building	During progress of work in shops --	Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)	Yes
	During erection on board vessel ---	Total No. of visits	✓

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. (1733) M/S "Afulcrow" 926 R/T 19049

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

This Boiler has been built under Special Survey in accordance with the Approved plans & the workmanship & material are of good quality. It is now securely fitted on board.

This Report accompanies that of the Dr. relieving

Survey Fee	£	:	:	When applied for,	19
<i>Charged on Mackay Rep't.</i>					
Travelling Expenses (if any)	£	:	:	When received,	19

Wm. Gordon. Minister

*Engineer Surveyor to Lloyd's Register of Shipping.*

Committee's Minute GLASGOW 1 OCT 1930

Assigned See accompanying report. JMM