

Rpt. 5a.

## REPORT ON BOILERS.

No. 52181

Received at London Office

9 MAR 1932

Date of writing Report 25-2-1932 When handed in at Local Office 26-2-1932 Port of Glasgow

No. in Survey held at 84debank

Date, First Survey 17-9-31 Last Survey 24-2-1932.

Reg. Book.

on the

S.S. "Kowan"

(Number of Visits)

Gross 500  
Net 188

Master

Built at

Bowling

By whom built

Scott &amp; Sons

Yard No.

221

When built 1922

Engines made at

84debank

By whom made

Hitchison Blair &amp; Co. Ltd.

Engine No.

183

When made 1922

Boilers made at

Glasgow

By whom made

D. Kowan &amp; Co. Ltd.

Boiler No.

387

When made 1922

Nominal Horse Power

Owners

Frontier Tonn S.S. Co.

Port belonging to

Tunary

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

Manufacturers of Steel

See Report No. 61970

(Letter for Record)

Total Heating Surface of Boilers

Is forced draught fitted

Coal or Oil fired Coal

No. and Description of Boilers

Working Pressure 200

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

20 S.S.

Area of each set of valves per boiler

{ per Rule

10 1/2 1/2 63 5

{ as fitted

11-87 9

Pressure to which they are adjusted

200

Are they fitted with easing gear

7

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

None

Smallest distance between boilers or uptakes and bunkers or woodwork

Well clear

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Open flange

Is the bottom of the boiler insulated

Largest internal dia. of boilers

Length

Shell plates: Material

Tensile strength

Thickness

Are the shell plates welded or flanged

Description of riveting: circ. seams { end

inter.

long. seams

Diameter of rivet holes in { circ. seams

{ long. seams

Pitch of rivets {

Percentage of strength of circ. end seams { plate

{ rivets

Percentage of strength of circ. intermediate seam { plate

{ rivets

Percentage of strength of longitudinal joint { plate

{ rivets

{ combined

Working pressure of shell by Rules

Thickness of butt straps { outer

{ inner

No. and Description of Furnaces in each Boiler

Material

Tensile strength

Smallest outside diameter

Length of plain part { top

{ bottom

Thickness of plates { crown

{ bottom

Description of longitudinal joint

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

Working pressure of furnace by Rules

End plates in steam space: Material

Tensile strength

Thickness

Pitch of stays

How are stays secured

Working pressure by Rules

Tube plates: Material { front

{ back

Tensile strength {

Thickness {

Mean pitch of stay tubes in nests

Pitch across wide water spaces

Working pressure { front

{ back

Girders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder

at centre

Length as per Rule

Distance apart

No. and pitch of stays

in each

Working pressure by Rules

Combustion chamber plates: Material

Tensile strength

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

Are stays fitted with nuts or riveted over

Working pressure by Rules

Front plate at bottom: Material

Tensile strength

Thickness

Lower back plate: Material

Tensile strength

Thickness

Pitch of stays at wide water space

Are stays fitted with nuts or riveted over

Working Pressure

Main stays: Material

Tensile strength

Diameter { At body of stay,

{ or

{ Over threads

No. of threads per inch

Area supported by each stay

Working pressure by Rules

Screw stays: Material

Tensile strength

Diameter { At turned off part,

{ or

{ Over threads

No. of threads per inch

Area supported by each stay

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Working pressure by Rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_ Margin stays: Diameter { At turned off part, or Over threads \_\_\_\_\_  
No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_  
Tubes: Material \_\_\_\_\_ External diameter { Plain \_\_\_\_\_ Stay \_\_\_\_\_ Thickness { \_\_\_\_\_ No. of threads per inch \_\_\_\_\_  
Pitch of tubes \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Manhole compensation: Size of opening in \_\_\_\_\_  
shell plate \_\_\_\_\_ Section of compensating ring \_\_\_\_\_ No. of rivets and diameter of rivet holes \_\_\_\_\_  
Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged \_\_\_\_\_ 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 \_\_\_\_\_ Diameter of rivet holes and pitch \_\_\_\_\_  
How connected to shell \_\_\_\_\_ Size of doubling plate under dome \_\_\_\_\_  
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, \_\_\_\_\_

Manufacturer, \_\_\_\_\_

Dates { During progress of work in shops - - }  
of Survey { During erection on board vessel - - }  
while building

Are the approved plans of boiler and superheater forwarded herewith \_\_\_\_\_  
(If not state date of approval.)

SEE ACCOMPANYING MACHINERY REPORT.

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 securely fitted on frame, and the safety valves adjusted under steam.*

Survey Fee ... .. £ : : When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

Committee's Minute **GLASGOW 8 - MAR 1932**

Assigned SEE ACCOMPANYING MACHINERY REPORT.

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



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