

## REPORT ON BOILERS.

No. 86110

26 AUG 1930

Received at London Office

Date of writing Report

1930

When handed in at Local Office

23.8.1930

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

Reg. Book.

Scotswood

Date, First Survey

13 Nov 29

Last Survey

18 Aug 1930

Tonnage on the

M.V. "KIM"

(Number of Visits)

Gross 6074

Tons

Net 3575

Master

Built at

Walker

By whom built

Sir W. G. Armstrong Whitworth &amp; Co. Ltd.

Yard No. 1062

When built 1930.

Engines made at

Scotswood

By whom made

Messrs. Sir W. G. Armstrong Whitworth &amp; Co. Ltd.

Engine No. 89.

When made 1930

Boilers made at

Scotswood

By whom made

Messrs. Sir W. G. Armstrong Whitworth &amp; Co. Ltd.

Boiler No. 89

When made 1930

Nominal Horse Power

583.

Owners

Sverre Sturlung.

Port belonging to

Bergen.

## LOW PRESSURE AIR RECEIVER.

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville &amp; Sons Glasgow.

(Letter for Record) ✓

CAPACITY OF AIR RECEIVER

42 cu ft.

Total Heating Surface of Boilers

Is forced draught fitted ✓

Coal or Oil fired ✓

No. and Description of Boilers

One Riveted Air Receiver.

Working Pressure 180 lb/sq. in.

Tested by hydraulic pressure to

320 lb

Date of test

30.5.30

No. of Certificate

3227

Can each boiler be worked separately ✓

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2 spring loaded.

Area of each set of valves per boiler

per Rule

as fitted

6.28 sq. ft.

Pressure to which they are adjusted

180 lb/sq. in.

Are they fitted with easing gear ✓

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

✓

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

✓

Largest internal dia. of

RECEIVER

2'-6"

Length

7'-0"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

5/16"

Are the shell plates welded or flanged

neither

Description of riveting: circ. seams

end

S.R. lap

long. seams

D.R. lap

Diameter of rivet holes in

circ. seams

1/16"

Pitch of rivets

2"

inter.

2.41"

Percentage of strength of circ. end seams

plate

65.5 %.

Percentage of strength of circ. intermediate seam

plate

rivets

✓

Percentage of strength of longitudinal joint

plate

71.4 %.

rivets

81.3 %.

Working pressure of shell by Rules

184 lb/sq. in.

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

Steel

Tensile strength

26.30 tons

Thickness

F 2 1/2" B 1 1/2"

RADIUS

2'-6"

How are stays secured

✓

Working pressure by Rules

250 lb/sq. in.

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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Foundation

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REPORT ON BOILERS

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 \_\_\_\_\_

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 \_\_\_\_\_

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 \_\_\_\_\_

FOR THE FOREGOING IS A CORRECT DESCRIPTION,  
SIR W. G. ARMSTRONG WHITWORTH & COMPANY (ENGINEERS) LIMITED  
Manufacturers

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

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

Total No. of visits \_\_\_\_\_

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The Receiver has been built under Special Survey and in accordance with the Society's Rules & approved plan. The materials & workmanship are sound and good. The safety valves were adjusted to the approved working pressure.*

Survey Fee ... £ \_\_\_\_\_ When applied for, 192

Travelling Expenses (if any) £ \_\_\_\_\_ When received, 192

*For See See heavy Report*

*L. J. Pickett.*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 2 SEP 1930

Assigned *See F.E. Rpt.*