

REPORT ON BOILERS.

No. 85779

Received at London Office

of writing Report

When handed in at Local Office **23rd May 1930.** Port of **NEWCASTLE-ON-TYNE**

Survey held at

Scotswood

Date, First Survey

8 Oct. 1929

Last Survey

16 May 1930

on the

M.V. "EVINA"

(Number of Visits)

Gross **6121**

Net **3570**

Built at

Walker.

By whom built **Sir W.G. Armstrong Whitworth & Co. Ltd.** and No. **1060**

When built **1930**

Engines made at

Scotswood

By whom made **Sir W.G. Armstrong Whitworth & Co. Ltd.** Engine No. **87.**

When made **1930**

Boilers made at

Scotswood

By whom made **Sir W.G. Armstrong Whitworth & Co. Ltd.** Boiler No. **87.**

When made **1930.**

Indicated Horse Power

583.

Owners

Hansen Langer.

Port belonging to

KRISTIANSAND.

LOW PRESSURE AIR RECEIVER.

~~TUBULAR BOILERS MAIN AUXILIARY OR DONKEY.~~

Manufacturers of Steel

David Colville & Sons Ltd Glasgow.

(Letter for Record)

Capacity of Air Receiver

42 cu. ft.

Is forced draught fitted

Coal or Oil fired

Heating Surface of Boilers

Description of Boilers

One Riveted Air Receiver

Working Pressure **180 lb/sq in**

Tested by hydraulic pressure to

320 lb/sq in

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

2 Spring loaded

Area of each set of valves per boiler

per Rule
as fitted **6.28 sq in.**

Pressure to which they are adjusted **180 lb/sq in**

Are they fitted with easing gear

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

Least distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Least distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Least internal dia. of boilers

2'-6"

Length

7'-0"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

5/16"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end **S.R. Lap**

Seams

D.R. Lap

Diameter of rivet holes in

circ. seams **1 1/16"**

long. seams **1 1/16"**

Pitch of rivets

2"

2.41"

Percentage of strength of circ. end seams

plate **65.5%**

rivets **48.8%**

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate **71.4%**

rivets **81.3%**

combined **83.35%**

Working pressure of shell by Rules

184 lb/sq in

No. and Description of Furnaces in each Boiler

Tensile strength

Smallest outside diameter

Thickness of plates

top

bottom

Thickness of plates

top

bottom

Description of longitudinal joint

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

Working pressure of furnace by Rules

Plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

F 3/32" B 1/2"

Pitch of stays

Radius

Are stays secured

Working pressure by Rules

250 lb/sq in

Plates: Material

front

back

Tensile strength

Thickness

Pitch of stay tubes in nests

Pitch across wide water spaces

Working pressure

front

back

Plates to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder

Length as per Rule

Distance apart

No. and pitch of stays

Working pressure by Rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Working pressure by Rules

Back

Top

Are stays fitted with nuts or riveted over

Working pressure by Rules

Front plate at bottom: Material

Tensile strength

Working pressure by Rules

Lower back plate: Material

Tensile strength

Thickness

Working pressure by Rules

Are stays fitted with nuts or riveted over

Working Pressure

Main stays: Material

Tensile strength

At body of stay

Over threads

No. of threads per inch

Area supported by each stay

Working pressure by Rules

Screw stays: Material

Tensile strength

At turned off part

Over threads

No. of threads per inch

Area supported by each stay

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Working pressure by Rules *8558* 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 *1.25 inch* 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 Working pressure by Rules
 How connected to shell Inner radius of crown Working pressure by Rules
 of rivets in outer row in dome connection to shell Size of doubling plate under dome Diameter of rivet holes and pitch

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,*
 BY *W. G. ARMSTRONG WHITWORTH & COMPANY (ENGINEERS) LIMITED* Manufacturer.

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

Is this Boiler a duplicate of a previous case If so, state Vessel's name and Report No.

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 beam. The materials & workmanship are sound & good. The safety valves were adjusted to the approved working pressure.*

Survey Fee ... £ *See* When applied for, 19
 Travelling Expenses (if any) £ *Tricky Report.* When received, 19

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

Committee's Minute *TUE. 3 JUN 1930*
 Assigned *See report attached*

