

REPORT ON BOILERS.

No. 85779

Received at London Office

26 MAY 1930

Date of writing Report

19

When handed in at Local Office

23rd May 1930.

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
eg. Book.

Scotswood.

Date, First Survey

8 Oct. 1929

Last Survey

16 May 1930

on the

M.V. "EVINA"

(Number of Visits)

Gross 6121

Tons Net 3570

Master

Built at

Walker.

By whom built

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

Yard 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

Horse Power

583.

Owners

Hansen Tengen

Port belonging to

KRISTIANSAND.

TITUBULAR BOILERS ~~MAIN~~ AUXILIARY OR DONKEY.

Manufacturers of Steel

D. Colville & Sons Glasgow (Plate). J. Thompson & Sons (Furnaces)

(Letter for Record

S.

Heating Surface of Boilers

2047 sq ft.

Is forced draught fitted

No.

Coal or Oil fired

oil.

Description of Boilers

One S.E. Multitubular.

Working Pressure

180 lb/sq in.

by hydraulic pressure to

320 lb/sq in.

Date of test

28/2/30

No. of Certificate

434.

Can each boiler be worked separately

Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2 Spring loaded.

of each set of valves per boiler

per Rule

15.75"

as fitted

16.58"

Pressure to which they are adjusted

180 lb/sq in.

Are they fitted with easing gear

Yes.

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

✓

Distance between boilers or uptakes and bunkers or woodwork

✓

Is oil fuel carried in the double bottom under boilers

✓

Distance between shell of boiler and tank top plating

✓

Is the bottom of the boiler insulated

Yes.

Internal dia. of boilers

15'-0 1/2"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

D.R. Lap

T.R. Double Butt Strap

Diameter of rivet holes in

circ. seams

1 5/16"

long. seams

1 5/16"

Pitch of rivets

3-8 1/2"

9 1/2"

Age of strength of circ. end seams

plate

66%.

rivets

45%.

Percentage of strength of circ. intermediate seam

plate

✓

Age of strength of longitudinal joint

plate

85.6%.

rivets

89.0%.

combined

89.2%.

Working pressure of shell by Rules

183 lb/sq in.

No. and Description of Furnaces in each Boiler

3. Morrison Section Type.

Tensile strength

26-30 tons

Smallest outside diameter

3'-5 1/4"

Thickness of plates

1 1/2"

Description of longitudinal joint

welded.

Stiffening rings on furnace or c.c. bottom

none.

Working pressure of furnace by Rules

183 lb/sq in.

Stays in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/4"

Pitch of stays

16 3/4" x 20"

Stays secured

Nuts & washers inside & outside.

Working pressure by Rules

208 lb/sq in.

Stays: Material

front

Steel

Tensile strength

26-30 tons

Thickness

1 1/2"

back

Steel.

26-30 tons

2 1/2"

Pitch of stay tubes in nests

11"

Pitch across wide water spaces

14 1/2"

Working pressure

front

189 lb/sq in.

back

191 lb/sq in.

to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

8 x 1 1/2"

Length as per Rule

30"

Distance apart

8 3/4"

No. and pitch of stays

2 @ 9 1/4"

Working pressure by Rules

190 lb/sq in.

Combustion chamber plates: Material

Steel

Strength

26-30 tons

Thickness: Sides

1 1/8"

Back

1 1/8"

Top

1 1/8"

Bottom

7/8"

Stays to ditto: Sides

9" x 9 3/4"

Back

9 3/4" x 8 3/4"

Top

9 3/4" x 8 3/4"

Are stays fitted with nuts or riveted over

Nuts.

Working pressure by Rules

188 lb/sq in.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

2 3/4"

Stays at wide water space

14 3/4" x 8 3/4"

Are stays fitted with nuts or riveted over

Nuts.

Pressure

229 lb/sq in.

Main stays: Material

Steel

Tensile strength

28-32 tons

At body of stay,

3 1/4"

No. of threads per inch

6.

Area supported by each stay

381 sq in.

Over threads

224 lb/sq in.

Screw stays: Material

Steel

Tensile strength

26-30 tons

At turned off part,

1 3/4"

No. of threads per inch

9.

Area supported by each stay

87.5 sq in.

Over threads

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Working pressure by Rules *206 lb/sq. in.* Are the stays drilled at the outer ends *No.* Margin stays: Diameter *1 1/8" & 2 1/4"*
 No. of threads per inch *9.* Area supported by each stay *107 sq. in. & 149 sq. in.* Working pressure by Rules *199 lb/sq. in. & 190 lb/sq. in.*
 Tubes: Material *Steel* External diameter *3 1/2"* Thickness *3/16" & 3/8"* No. of threads per inch *9.*
 Pitch of tubes *4 3/4"* Working pressure by Rules *Plain* Stay *182 lb/sq. in.* Manhole compensation: Size of opening *15 1/2"*
 shell plate *21" x 17"* Section of compensating ring *20 3/8" x 1 1/4"* No. of rivets and diameter of rivet holes *36 @ 15 1/2"*
 Outer row rivet pitch at ends *4" & 9 1/8"* Depth of flange if manhole flanged *3 3/8"* Steam Dome: Material *None.*
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of rivets
 stays Inner radius of crown Working pressure by Rules
 How connected to shell Size of doubling plate under dome Diameter of rivet holes and
 of rivets in outer row in dome connection to shell

Type of Superheater *None.* Manufacturers of *None.*
 Number of elements Material of tubes Internal diameter and thickness of tubes
 Material of headers Tensile strength Thickness Can the superheater be shut off from the boiler?
 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
 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 *Yes.*

FOR THE FOREGOING IS A CORRECT DESCRIPTION,
 SIR W. G. ARMSTRONG WHITWORTH & COMPANY (ENGINEERS) LIMITED,
W. G. Armstrong Whitworth & Co. Ltd. Manufacturer

Dates of Survey *See Mch Report* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 while building *See Mch Report* Total No. of visits

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.) *The boiler has been built under Special Survey, and in accordance with the Society's Rules & approved plans. The materials & workmanship are sound & good. The boiler was hydraulically tested as per Rules & found satisfactory. The safety valves were adjusted under steam to the approved working pressure.*

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

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

Committee's Minute

Assigned

TUE. 3 JUN 1930

L.D. 180 lb



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