

REPORT ON BOILERS.

No. 49905

Date of writing Report

19

When handed in at Local Office

2. 12. 19

Received at London Office

4 DEC 1929

Port of

Glasgow

No. in Reg. Book

Survey held at

Glasgow

Date, First Survey

28 5 29

Last Survey

2-12-1929

1929

43015 on the

s/s "Zouave"

(Number of Visits)

33

Tons { Gross
Net

Master

Built at Buntisland

By whom built

Buntisland SBC

Yard No. 158

When built 1929

Engines made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Engine No. 918

When made 1929

Boilers made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Boiler No. 918

When made 1929

Nominal Horse Power

Owners

The Zinal Steamship Co. Ltd.

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Witkowitz Bergbau und Eisenhütten Gewerkschaft in Witkowitz

Total Heating Surface of Boilers

4606 sq. ft.

Is forced draught fitted

yes

Coal or Oil fired

coal

No. and Description of Boilers

Two single ended 2 SB.

Working Pressure

200

Tested by hydraulic pressure to

350

Date of test

12-11-29

No. of Certificate

18515

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

57 sq. ft.

No. and Description of safety valves to each boiler

two direct spring

Area of each set of valves per boiler

{ per Rule

13.4 sq. ft.

{ as fitted

14.14 sq. ft.

Pressure to which they are adjusted

205 lbs

Are they fitted with easing gear

yes

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

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

14'-6"

Length

11'-6"

Shell plates: Material

steel

Tensile strength

29-33 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

{ end

DR

Long. seams

WBS TR

Diameter of rivet holes in

{ circ. seams

F 1 3/16"

B 1 7/16"

{ long. seams

1 5/16"

Pitch of rivets

{ F 3.19"

B 3.51"

Percentage of strength of circ. end seams

{ plate

F 62.7

B 63.2

{ rivets

F 44

B 48.2

Percentage of strength of circ. intermediate seam

{ plate

88.4

{ rivets

89

Percentage of strength of longitudinal joint

{ plate

88.4

{ rivets

89

{ combined

88.6

Working pressure of shell by Rules

200 lbs

Thickness of butt straps

{ outer

1 5/16"

{ inner

1 1/16"

No. and Description of Furnaces in each Boiler

Three Weighston 3' x 1' x 1'

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

42.9375"

Length of plain part

{ top

{ bottom

Thickness of plates

{ crown

1 1/2"

{ bottom

1 3/32"

Description of longitudinal joint

welded

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

none

Working pressure of furnace by Rules

201

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1 1/32"

Pitch of stays

14" x 20"

How are stays secured

WN

Working pressure by Rules

201

Tube plates: Material

{ front

steel

{ back

"

Tensile strength

26-30 tons

Thickness

{ 3/32"

{ 4/32"

{ 5/32"

Lean pitch of stay tubes in nests

10.21"

Pitch across wide water spaces

13 1/2"

Working pressure

{ front

201

{ back

206

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

centre

2 @ 7 1/4" x 1 1/8"

Length as per Rule

29.516"

Distance apart

8 1/8"

No. and pitch of stays

each

2 @ 9 3/8"

Working pressure by Rules

207

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

2 3/32"

Back

2 1/32"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

9 1/2" x 9"

Back

8" x 9 1/4"

Top

9 1/2" x 8 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

200

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

2 1/32"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

2 1/32"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

201

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

{ At body of stay,

3" & 2 3/4"

{ or

{ Over threads

No. of threads per inch

6

Area supported by each stay

344 & 322

Working pressure by Rules

228 & 204

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

{ At turned off part,

1 5/8" & 1 3/4"

{ or

{ Over threads

No. of threads per inch

9

Area supported by each stay

74 & 85 sq. in.

Working pressure by Rules **205 & 211** Are the stays drilled at the outer ends **no** Margin stays: Diameter ^{At turned off part,} **1 3/4"**
No. of threads per inch **9** Area supported by each stay **82.6 sq"** Working pressure by Rules **220**
Tubes: Material **Iron** External diameter ^{Plain} **2 1/2"** Thickness ^{9 w.s.} **3/8"** No. of threads per inch **9**
Pitch of tubes **3 3/4" x 3 7/8"** Working pressure by Rules **230** Manhole compensation: Size of opening **15 1/2" x 19 1/2"**
shell plate **15 1/2" x 19 1/2"** Section of compensating ring **9 1/2" x 1 1/4"** No. of rivets and diameter of rivet holes **34 @ 1 5/16"**
Outer row rivet pitch at ends **9 1/8"** Depth of flange if manhole flanged **3"** Steam Dome: Material **none**
Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
Diameter of rivet holes **881** Pitch of rivets _____ Percentage of strength of joint ^{Plate} _____
Internal diameter **81 p** Working pressure by Rules _____ Thickness of crown **19 w.s.** No. and diameter _____
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 **none** Manufacturers of ^{Tubes} _____
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 **yes**

The foregoing is a correct description,
for David Rowan & Co. Ltd.
Arch. W. Grierson

Dates of Survey ^{During progress of work in shops - -} **See Accompanying Machinery Report** Are the approved plans of boiler and superheater forwarded herewith **yes**
^{while building} ^{During erection on board vessel - - -} **See Accompanying Machinery Report** (If not state date of approval) _____
Total No. of visits **33**

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 materials and workmanship are good.
The boilers have been constructed under special survey in accordance with the Rules.
These boilers have been efficiently fitted on board this vessel, their safety valves have been adjusted under steam as noted.

John Houston
Leith 13/1/30

Survey Fee £ _____ When applied for, _____
Travelling Expenses (if any) £ _____ When received, _____

Sch. Davis
Engineer, Surveyor to Lloyd's Register of Shipping

Committee's Minute **GLASGOW 31 DEC 1929**

Assigned **See Accompanying Machinery Report**

TUE. 21 JAN 1930

Lloyd's Register Foundation