

REPORT ON BOILERS.

No. 57355

26 AUG 1926

Received at London Office

Date of writing Report

19

When handed in at Local Office 22.8.36

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

29.5.36

Last Survey

15-8-1936

2706 on the Tri. S. "CERAMIC"

(Number of Visits 35)

Gross 18713
Net 11582

Master

Built at

Belfast

By whom built

Harland & Wolff Ltd.

Yard No.

When built 1913

Engines made at

Belfast

By whom made

Harland & Wolff Ltd.

Engine No.

When made 1913

Boilers made at

Belfast

By whom made

Harland & Wolff Ltd.

Boiler No.

When made 1913

Nominal Horse Power

Owners Shaw Savill & Albion Co. Ltd.

Port belonging to Southampton

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

(Letter for Record (S))

Total Heating Surface of Boilers

30,090 sq. ft.

Is forced draught fitted

No.

Coal or Oil fired

Coal

No. and Description of Boilers

Six double ended multitubular

Working Pressure 215 lb.

Tested by hydraulic pressure to

—

Date of test

—

No. of Certificate

Can each boiler be worked separately

Yrs.

Area of Firegrate in each Boiler

120.63 sq. ft.

No. and Description of safety valves to each boiler

3 spring loaded, in one chest.

Area of each set of valves per boiler

per Rule 27.25 sq. in.
as fitted 28.86 sq. in.

Pressure to which they are adjusted

215 lb.

Are they fitted with easing gear

Yrs.

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

No donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

20 1/2"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

25"

Is the bottom of the boiler insulated

Yrs.

Largest internal dia. of boilers

15' 6"

Length

19' 0"

Shell plates: Material

S

Tensile strength

29

Thickness

1 1/32"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end DRL
inter. TRL

Long. seams

TR. D.B.S.

Diameter of rivet holes in

circ. seams 1 1/32"
long. seams 1 1/32"

Pitch of rivets

4.06"

Percentage of strength of circ. end seams

plate 59.3
rivets 50.8

Percentage of strength of circ. intermediate seam

plate 64.8
rivets 65.7

Percentage of strength of longitudinal joint

plate 83.4
rivets 96.6
combined 86.2

Working pressure of shell by Rules

241 lb.

Thickness of butt straps

outer 1 1/16"
inner 1 1/16"

No. and Description of Furnaces in each Boiler

Six corrugated Morrison

Material

S

Tensile strength

26

Smallest outside diameter

3' 9 1/16"

Length of plain part

top
bottom

Thickness of plates

crown 23/32"
bottom 23/32"

Description of longitudinal joint

Weld

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

None

Working pressure of furnace by Rules

232.2 lb.

End plates in steam space: Material

S

Tensile strength

26

Thickness

1 1/8"

Pitch of stays

18 x 15 1/2"

How are stays secured

Nuts inside, washers & nuts outside

Working pressure by Rules

238.

Tube plates: Material

front S
back S

Tensile strength

26

Thickness

7/8"

Mean pitch of stay tubes in nests

8

Pitch across wide water spaces

16"

Working pressure

front 219.5
back 210

Girders to combustion chamber tops: Material

W.I.

Tensile strength

24

Depth and thickness of girder

at centre

8' x 7 1/8"

Length as per Rule

49 3/8"

Distance apart

8 1/2"

No. and pitch of stays

in each

6' x 7 1/4"

Working pressure by Rules

320 lb.

Combustion chamber plates: Material

S

Tensile strength

26

Thickness: Sides

7/8"

Back

—

Top

7/8"

Bottom

1 1/32"

Pitch of stays to ditto: Sides

7 3/4" x 7 3/4"

Back

—

Top

7 1/4" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

251, 243

Front plate at bottom: Material

S

Tensile strength

26

Thickness

7/8"

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

W.I.

Tensile strength

21 1/2

Diameter

At body of stay, 2 1/4"
Over threads 2 1/2"

No. of threads per inch

9

Area supported by each stay

148.5 sq. in.

Working pressure by Rules

229

Screw stays: Material

S

Tensile strength

26

Diameter

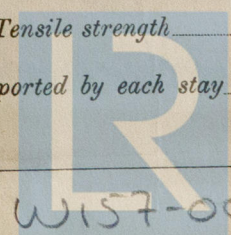
At turned off part, 1 7/8"
Over threads 1 7/8"

No. of threads per inch

10

Area supported by each stay

60.06



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Working pressure by Rules 253 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 3/4

No. of threads per inch 10 Area supported by each stay 52.56 Working pressure by Rules 345

Tubes: Material w.i. External diameter { Plain 2 3/4 Stay 2 3/4 Thickness { 7/16 1/2 3/4 No. of threads per inch 10

Pitch of tubes 4x4 Working pressure by Rules 275 Manhole compensation: Size of opening in shell plate 19x15 Section of compensating ring 1 1/2 flange No. of rivets and diameter of rivet holes 28 at 1 1/2

Outer row rivet pitch at ends 8 Depth of flange if manhole flanged manhole not flanged 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 { 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 none 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 of Survey { 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)

SEE ACCOMPANYING MACHINERY REPORT.

Total No. of visits

Is this Boiler a duplicate of a previous case ✓ If so, state Vessel's name and Report No. 250

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers were examined throughout, the scantlings checked against the plans forwarded with the Secretary's letter "E", 4.6.36. The boilers are now in good & efficient condition, and the safety valves were adjusted under steam to safe working pressure.

In recommendation as to class, please see machinery report.

22/8/36

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

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

CD

Engineer Surveyor to Lloyd's Register of Shipping.