

# REPORT ON BOILERS.

No. 31983

Received at London Office 17 DEC 1936

16 DEC. 1936

Port of

Sunderland.

Survey held at

Sunderland.

Date, First Survey

Last Survey

18 Dec 1936

on the

Screw Steamer "GENERTON"

(Number of Visits

Tons

4797

2800

Built at

Sunderland

By whom built

Shat Bros. Ltd

Yard No.

448.

When built

1936.

made at

Sunderland

By whom made

G. Clark (1936) Ltd

Engine No.

1202.

When made

1936.

made at

Sunderland

By whom made

G. Clark (1936) Ltd

Boiler No.

1202

When made

1936.

l Horse Power

408.

Owners

The Carlton Steamship Co. Ltd

Port belonging to

Newcastle.

## TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland

(Letter for Record

S. ✓)

Heating Surface of Boilers

4484 ft ✓

Is forced draught fitted

Yes. ✓

Coal or Oil fired

Coal. ✓

Description of Boilers

Two Single ended multitubular marine

Working Pressure

220. ✓

by hydraulic pressure to

380

Date of test

16/11/36

No. of Certificate

4208.

Can each boiler be worked separately

Yes. ✓

of Firegrate in each Boiler

55 ft

No. and Description of safety valves to each boiler

Two "back-suction" High Lift. ✓

of each set of valves per boiler

(per Rule

6.28 ft

Pressure to which they are adjusted

✓

Are they fitted with easing gear

Yes. ✓

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

✓

least distance between boilers or uptakes and bunkers or woodwork

2'-0" ✓

Is oil fuel carried in the double bottom under boilers

No. ✓

least distance between shell of boiler and tank top plating

3'-0" ✓

Is the bottom of the boiler insulated

Yes. ✓

least internal dia. of boilers

14'-9 1/8"

Length

11'-6"

Shell plates: Material

Steel ✓

Tensile strength

29/33. ✓

ness

1 1/16"

Are the shell plates welded or flanged

No. ✓

Description of riveting: circ. seams

(end

D.R. Lap. ✓

seams

T.R.D.B.S. ✓

Diameter of rivet holes in

(circ. seams

F. 1 1/16" B. 1 1/2"

Pitch of rivets

F. 4 1/16" B. 4 5/16"

9 1/8"

centage of strength of circ. end seams

(plate

F. 64.6 B. 65.1

(rivets

F. 44.0 B. 45.0

Percentage of strength of circ. intermediate seam

(plate

✓

centage of strength of longitudinal joint

(plate

84.81

(rivets

92.0

(combined

88.15

Working pressure of shell by Rules

222

ness of butt straps

(outer

1 3/32"

(inner

1 1/32"

No. and Description of Furnaces in each Boiler

Three Corrugated (Leighton). ✓

trial

Steel ✓

Tensile strength

26/30 ✓

Smallest outside diameter

43 1/16" ✓

h of plain part

(top

✓

Thickness of plates

(crown

2 1/32"

Description of longitudinal joint

Weld. ✓

ensions of stiffening rings on furnace or a.c. bottom

✓

Working pressure of furnace by Rules

222. ✓

plates in steam space: Material

Steel ✓

Tensile strength

26/30 ✓

Thickness

1 29/64"

Pitch of stays

19 3/8" x 23" ✓

are stays secured

Double nuts. ✓

Working pressure by Rules

220. ✓

plates: Material

(front

Steel ✓

(back

Tensile strength

26/30 ✓

Thickness

2 1/32"

346. ✓

pitch of stay tubes in nests

12 3/4" x 8 1/4"

Pitch across wide water spaces

14" ✓

Working pressure

(front

346. ✓

ers to combustion chamber tops: Material

Steel ✓

Tensile strength

29/33 ✓

Depth and thickness of girder

entre 9 3/8" x 13 1/4" ✓

Length as per Rule

34 1/2" ✓

Distance apart

9 1/4" ✓

No. and pitch of stays

ch 3 @ 8" ✓

Working pressure by Rules

223. ✓

Combustion chamber plates: Material

Steel ✓

ile strength

26/30 ✓

Thickness: Sides

45/64" ✓

Back

11/16" ✓

Top

11/16" ✓

Bottom

2 1/32" ✓

of stays to ditto: Sides

8" x 9 3/8" ✓

Back

8" x 9 1/4" ✓

Top

8" x 9 1/4" ✓

Are stays fitted with nuts or riveted over

Nuts. ✓

Working pressure by Rules

229, 220, 220

Front plate at bottom: Material

Steel ✓

Tensile strength

26/30. ✓

ness

1" ✓

Lower back plate: Material

Steel ✓

Tensile strength

26/30. ✓

Thickness

1" ✓

of stays at wide water space

14 1/2" x 9 1/4" ✓

Are stays fitted with nuts or riveted over

Nuts. ✓

Working Pressure

249. ✓

Main stays: Material

Steel ✓

Tensile strength

28/32. ✓

eter (At body of stay,

3 3/8" 3 1/8" ✓

(Over threads

3 3/4" 3 1/2" ✓

No. of threads per inch

6. ✓

Area supported by each stay

21" x 21", 21 1/2" x 14 1/2" ✓

Working pressure by Rules

224, 226. ✓

Screw stays: Material

Steel ✓

Tensile strength

26/30 ✓

eter (At turned off part,

1 3/4" ✓

(Over threads

✓

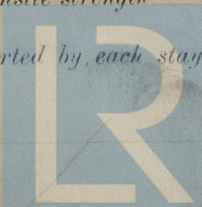
No. of threads per inch

9. ✓

Area supported by each stay

8" x 9 3/8" ✓

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Working pressure by Rules 242. Are the stays drilled at the outer ends *no.* Margin stays: Diameter *At turned off part, 1 1/8" 2"*  
 No. of threads per inch 9. Area supported by each stay *9 1/4" x 11 1/4", 12 1/16" x 11 1/4"* Working pressure by Rules 236, 237  
 Tubes: Material *S.D. Steel* External diameter *Plain 3" Stay 3"* Thickness *5/16 3/8 1/2* No. of threads per inch 9.  
 Pitch of tubes *4 1/4" x 4 1/8"* Working pressure by Rules 284, 254, 246. Manhole compensation: Size of shell plate *16" x 12"* Section of compensating ring *9" x 1 1/16"* No. of rivets and diameter of rivet holes *30 @ 1 1/2"*  
 Outer row rivet pitch at ends *9 1/8"* Depth of flange if manhole 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 of rivets in outer row in dome connection to shell  
 Type of Superheater *North Eastern Maximal Smoke tube* Manufacturers of Tubes *Messrs. Yalbot Stead*  
 Number of elements *116* Material of tubes *S.D. Steel* Steel castings *Gradingham Steel Co.*  
 Material of headers *Forged Steel* Tensile strength *26/30* Thickness *1/8"* Can the superheater be shut off from the boiler *Yes.*  
 the boiler be worked separately *Yes.* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *Yes.*  
 Area of each safety valve *3.14 sq"* Are the safety valves fitted with easing gear *Yes.* Working pressure *220.*  
 Rules *220.* Pressure to which the safety valves are adjusted *1500 lbs/sq. in.* Hydraulic test pressure *4400 lbs/sq. in.*  
 tubes *1500 lbs/sq. in.* castings *660 lbs/sq. in.* and after assembly in place *4400 lbs/sq. in.* Are drain cocks or valves fitted to free the superheater from water where necessary *Yes.*  
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *Yes.*

The foregoing is a correct description,  
 FOR GEORGE CLARK (1936) LTD.

Dates of Survey *During progress of work in shops - - - Please see Mech. Rpt.* 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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been constructed under Special Survey in accordance with approved plan & the rules of the Society.*

*The materials & workmanship are good. On completion the boilers have been tested by hydro pressure of 3800 lbs/sq. in. & found tight & sound. They have been securely fixed on board the vessel*

*For recommendation please see Mech. Rpt.*

Survey Fee ... *See Mech. Rpt.* When applied for, 192  
 Travelling Expenses (if any) ... When received, 192

*W. H. Fraser*  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *FRI. 18 DEC 1936*

THURS 31 DEC 1936

Assigned *See minute on F.E. rpt.*



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