

REPORT ON BOILERS.

No. 32182

Received at London Office

AUG 27 1937

Date of writing Report

1937

When handed in at Local Office

26 AUG 1937

Port of

Sunderland.

No. in Survey held at
Reg. Book.

Sunderland.

Date, First Survey

Last Survey 20 Aug 1937

S.S. "CORABELLA"

(Number of Visits)

Tons

Gross

5682

Net

3373

Master

Built at

Sunderland

By whom built

J.P. Thompson & Son Ld.

Yard No.

581

When built

1934

Engines made at

Sunderland

By whom made

G. Clark (1936) Ld.

Engine No.

1206

When made

1934

Boilers made at

Sunderland

By whom made

G. Clark (1936) Ld.

Boiler No.

1206

When made

1934

Nominal Horse Power

395.

Owners

The Tenax Steamship Co Ld.

Port belonging to

London.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Messrs. Colvilles Ld.

(Letter for Record)

S.

Total Heating Surface of Boilers

5580 sq. ft.

Is forced draught fitted

Yes.

Coal or Oil fired

Coal.

No. and Description of Boilers

Three Single ended multitubular marine

Working Pressure

220

Tested by hydraulic pressure to

380

Date of test

11/6/37

No. of Certificate

4230
4231
4232

Can each boiler be worked separately

Yes.

Area of Firegrate in each Boiler

46.6 sq. ft.

No. and Description of safety valves to each boiler

Two Cockburn High Lift

Area of each set of valves per boiler

per Rule
as fitted4.94 sq. ft.
6.28 sq. ft.

Pressure to which they are adjusted

220

Are they fitted with easing gear

Yes.

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

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-6"

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

Yes.

Largest internal dia. of boilers

13'-3 13/32"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29/33.

Thickness

1 19/64"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

D.R. Lap.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

F. 1 5/16"

B. 1 3/8"

Pitch of rivets

F. 3 3/4"

B. 4 1/8"

Percentage of strength of circ. end seams

plate

F. 65.0

B. 66.6

Percentage of strength of circ. intermediate seam

plate

circ.

Percentage of strength of longitudinal joint

plate

85.13

rivets

92.0

combined

88.9

Working pressure of shell by Rules

222.

Thickness of butt straps

outer
inner

1 1/8"

No. and Description of Furnaces in each Boiler

Three corrugated (Leighton).

3cf

Material

Steel

Tensile strength

26/30.

Smallest outside diameter

3'-2 1/16"

Length of plain part

top
bottom

✓

Thickness of plates

crown
bottom

19/32"

Description of longitudinal joint

weld.

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

Working pressure of furnace by Rules

224.

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 19/64"

Pitch of stays

18" x 19"

How are stays secured

Double nuts.

Working pressure by Rules

229.

Tube plates: Material

front
back

Steel

Tensile strength

26/30.

Thickness

1 1/16"

13/16"

Mean pitch of stay tubes in nests

11 1/4" x 8 3/4"

Pitch across wide water spaces

14" x 8 1/4"

Working pressure

front

44.1 W.W. 294.

back

24.

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33.

Depth and thickness of girder

at centre

8" x 1 3/4"

Length as per Rule

2'-8"

Distance apart

8 3/8"

No. and pitch of stays

in each

2 @ 9 3/4"

Working pressure by Rules

230.

Combustion chamber plates: Material

Steel

Tensile strength

26/30.

Thickness: Sides

25/32"

Back

23/32"

Top

23/32"

Bottom

23/32"

Pitch of stays to ditto: Sides

9 3/4" x 8 5/8"

Back

CENT. 9 1/4" x 8 5/8"

Top

9 3/4" x 8 5/8"

Are stays fitted with nuts or riveted over

nuts.

Working pressure by Rules

254, 240, 225, 221

Front plate at bottom: Material

Steel

Tensile strength

26/30.

Thickness

1 1/16"

Lower back plate: Material

Steel

Tensile strength

26/30.

Thickness

1"

Pitch of stays at wide water space

14 1/2" x 9 1/8"

Are stays fitted with nuts or riveted over

nuts.

Working Pressure

282.

Main stays: Material

Steel

Tensile strength

28/32.

Diameter

At body of stay,
or
Over threads

3" x 2 7/8"

3 3/8" x 3 1/4"

No. of threads per inch

6.

Area supported by each stay

18 7/8" x 16 1/16"

Working pressure by Rules

234 225

Screw stays: Material

Steel

Tensile strength

26/30.

Diameter

At turned off part,
or
Over threads

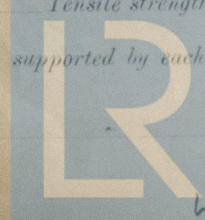
1 3/4"

No. of threads per inch

9.

Area supported by each stay

9" x 9"

Lloyd's Register
Foundation

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Handwritten notes and signatures on the left margin.

Working pressure by Rules 223. Are the stays drilled at the outer ends 40. / Margin stays: Diameter { At turned off part, 2" 2 1/4" / Or over threads 2 1/4" /

No. of threads per inch 9. Area supported by each stay 11 3/8" x 9" 11 3/8" x 12 1/2" Working pressure by Rules 243 230.

Tubes: Material Lap welded whol. iron External diameter { Plain 3" / Stay 3" Thickness 1/4" 5/16" 3/8" 7/16" No. of threads per inch 9. /

Pitch of tubes 4 1/4" = 4 1/8" Working pressure by Rules 269, 286, 258 Manhole compensation: Size of opening

shell plate (In end 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 4" 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

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 North Eastern Marine Eng Co. Ltd. Smoke tubes. Manufacturers of Tubes Messrs. Stewart & Clayton. Steel castings Loughingham Steel Co. Ltd.

Number of elements 129. Material of tubes S.D. Steel Internal diameter and thickness of tubes 15 1/4" 2 1/2" /

Material of headers Angled Steel Tensile strength 26/30. Thickness 1 1/8" Can the superheater be shut off

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 2.4 sq. Are the safety valves fitted with easing gear Yes. Working pressure as per

Rules 220 lbs/sq. Pressure to which the safety valves are adjusted 220 lbs/sq. Hydraulic test pressure

tubes 1500 lbs/sq. castings 660 lbs/sq. and after assembly in place 440 lbs/sq. 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.
H. Mackenzie Manufacturer

Dates of Survey { During progress of work in shops - - - Please see Mch. Rpt. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes. /

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 the approved plans & the Rules of the Society.

The material & workmanship are good.

On completion the boilers have been tested by hydrostatic pressure of 380 lbs/sq. & found tight & sound. They have been securely fixed on board the vessel, & examined under steam.

Safety valves of boilers & superheaters adjusted to working pressure & accumulation test carried out satisfactorily.

For recommendation please see Mch. Rpt.

Survey Fee ... See Mch. Rpt. When applied for, 192

Travelling Expenses (if any) ... Rpt. When received, 192

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

Committee's Minute TUE 31 AUG 1937

Assigned See Std. J.E. 32182