

REPORT ON BOILERS.

No. 95130

Received at London Office JUN 11 1937

Date of writing Report

19

When handed in at Local Office

7/6/37

Port of NEWCASTLE-ON-TYNE

No. in Survey held at

Wallsend

Date, First Survey

30 July 1936

Last Survey

31 June 1937

Reg. Book.

(Number of Visits)

Tons

Gross 6618
Net 4055

on the

Steamer "INKOSI"

Master

Built at

Wallsend

By whom built

Swan Hunter & Wigham Richardson

Yard No. 1525

When built 1937

Engines made at

Wallsend

By whom made

Wallsend Slipway & Engineering Co. Ltd.

Engine No. 921

When made 1937

Boilers made at

Wallsend

By whom made

Wallsend Slipway & Engineering Co. Ltd.

Boiler No. 921

When made 1937

Nominal Horse Power

835

Owners

Charante S. S. Co. Ltd.

Port belonging to

Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland: Rutherford Iron Works

(Letter for Record)

r

Total Heating Surface of Boilers

12000 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

Four single ended multitubular

Working Pressure

235 lbs

Tested by hydraulic pressure to

403 lbs

Date of test

11-12-36

No. of Certificate

699+702

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

{ per Rule
as fitted

15 sq ft

Pressure to which they are adjusted

240 lbs

Are they fitted with easing gear

Yes

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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

30"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16'-6"

Length

12'-6"

Shell plates: Material

Steel

Tensile strength

31-35 tons

Thickness

1 19/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end Lap S.R.

long. seams

Triple Riveted Oil Straps

Diameter of rivet holes in

{ circ. seams
long. seams

1 21/32"

Pitch of rivets

4" 7/8"

Percentage of strength of circ. end seams

{ plate
rivets65.
42.5

Percentage of strength of circ. intermediate seam

{ plate
rivets—
—

Percentage of strength of longitudinal joint

{ plate
rivets
combined84.9
85.2
87.1

Working pressure of shell by Rules

236 lbs

Thickness of butt straps

{ outer
inner1 7/32"
1 11/32"

No. and Description of Furnaces in each Boiler

4 Brighton

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

42 1/4"

Length of plain part

{ top
bottom✓
✓

Thickness of plates

{ crown
bottom

11/16"

Description of longitudinal joint

Weld

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

Working pressure of furnace by Rules

239 lbs

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 7/16"

Pitch of stays

22" x 18"

How are stays secured

Double nuts

Working pressure by Rules

240 lbs

Tube plates: Material

{ front
backSteel
Steel

Tensile strength

{ 26-30 tons

Thickness

{ 7/8"

Mean pitch of stay tubes in nests

10 3/8"

Pitch across wide water spaces

13 3/4"

Working pressure

{ front 239 lbs
back 258 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

29-33 tons

Depth and thickness of girder

at centre

11 1/4" x 2 @ 3/4"

Length as per Rule

40 13/32"

Distance apart

7 3/4"

No. and pitch of stays

in each

3 @ 9 5/8"

Working pressure by Rules

242 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

23 3/32"

Back

23 3/32"

Top

23 3/32"

Bottom

7/8"

Pitch of stays to ditto: Sides

7 3/4" x 9 5/8"

Back

8" x 9 3/8"

Top

7 3/4" x 9 5/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

239 lbs

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

1"

Pitch of stays at wide water space

14 1/4" x 9 3/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

285 lbs

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

{ At body of stay,
or
Over threads

3 1/2"

No. of threads per inch

6

Area supported by each stay

396 sq in

Working pressure by Rules

240 lbs

Screw stays: Material

Iron

Tensile strength

21.5 tons (mins)

Diameter

{ At turned off part,
or
Over threads

1 3/4"

No. of threads per inch

9

Area supported by each stay

75 sq in

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Working pressure by Rules 242 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" or Over threads 2" ✓
No. of threads per inch 9 Area supported by each stay 104 sq" Working pressure by Rules 237 lbs
Tubes: Material Iron External diameter { Plain 3" Stay 3" Thickness { 7/16" + 5/16" No. of threads per inch 9 ✓
Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 277 lbs Manhole compensation: Size of opening in
shell plate 20" x 16" Section of compensating ring 24" x 1 19/32" No. of rivets and diameter of rivet holes 36 @ 1 21/32" ✓
Outer row rivet pitch at ends 11" Depth of flange if manhole flanged 3 19/32" ✓ 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 Sugden's Smoke Tube Type Manufacturers of { Tubes Tubes Ltd. Steel castings Babcock & Wilcox Ltd.
Number of elements 58 Material of tubes Cold drawn steel Internal diameter and thickness of tubes 16 mm : 3 mm ✓
Material of headers Mild steel Tensile strength 28-30 tons Thickness 3/4" Can the superheater be shut off and
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 4.71 sq" Are the safety valves fitted with easing gear Yes Working pressure as per
Rules 235 lbs Pressure to which the safety valves are adjusted 240 lbs Hydraulic test pressure:
tubes 1000 lbs 705 lbs and after assembly in place 470 lbs 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 THE WALLS AND STEEL ENGINEERING CO. LIMITED.
J. H. Thompson DIRECTOR, Manufacturer.

Dates { During progress of work in shops - - }
of Survey while { During erection on board vessel - - }
building

See Machinery Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) Yes

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 boilers have been built under Special Survey, in accordance with the Rules and approved plan, the materials and workmanship are good; they have been fitted on board in an efficient manner, tried under working conditions and found satisfactory.

Survey Fee £ : : ✓

When applied for, 19

Travelling Expenses (if any) £ : : ✓

When received, 19

J. H. Thompson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 15 JUN 1937

Assigned

See Nwc. S.E. 95730



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