

REPORT ON BOILERS.

Sld. No. 29638
Hpl. No. 16582.17 DEC 1927
15 FEB 1928

Received at London Office

Date of writing Report

192

When handed in at Local Office

15.12.1927 Port of

West Hartlepool.

No. in Survey held at
Reg. Book.

Hartlepool

Date, First Survey

2nd Sept.

Last Survey

9th Dec. 1927.

(Number of Visits

36)

Gross

6371

Tons

Net 3927

on the

S. S. "CARICA MILICA"

Master

Built at Sunderland

By whom built

Wm Doxford & Sons

Yard No. 586

When built 1927

Engines made at

Sunderland

By whom made

Richardsons Westgarth & Co Ltd

Engine No 2195

When made 1927

Boilers made at

Hartlepool

By whom made

ditto

Boiler No 2495

When made 1927

Nominal Horse Power

569

Owners

Atlantic Navigation Co.,
Rex to Ltd. B.N. Panay.

Port belonging to

DUBROVNIK.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

D. Colville & Sons Ltd

(Letter for Record

S ✓)

Total Heating Surface of Boilers

8491 sq. ft. 358

Is forced draught fitted

yes ✓

Coal or Oil fired

coal ✓

Working Pressure

180 lbs ✓

No. and Description of Boilers

3 single ended ✓

Tested by hydraulic pressure to

320 lbs

Date of test

27.10.27

No. of Certificate

3717

Can each boiler be worked separately

yes ✓

Area of Firegrate in each Boiler

59.7 sq. ft.

No. and Description of safety valves to each boiler

2 direct spring ✓

Area of each set of valves per boiler

per Rule 18.1 sq. ft.

as fitted 25.1 sq. ft.

Pressure to which they are adjusted

185 lbs ✓

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

8'-0" ✓

Is oil fuel carried in the double bottom under boilers

No. ✓

Smallest distance between shell of boiler and tank top plating

2'-3" ✓

Is the bottom of the boiler insulated

No. ✓

Largest internal dia. of boilers

15'-6 1/2" ✓

Length

12'-0" ✓

Shell plates: Material

Steel ✓

Tensile strength

29/33

Thickness

1 1/4" ✓

Are the shell plates welded or flanged

no ✓

Description of riveting: circ. seams

end

D. riv. lap ✓

long. seams

Tub. riv. D.B.S. ✓

Diameter of rivet holes in

circ. seams 1 3/16" ✓

long. seams 1 1/4" ✓

Pitch of rivets

3 1/4" ✓

8 1/2" ✓

Percentage of strength of circ. end seams

plate 63.5

rivets 67

Percentage of strength of circ. intermediate seam

plate

rivets ✓

Percentage of strength of longitudinal joint

plate 85.29

rivets 85.8

combined 87.76

Working pressure of shell by Rules

182 lbs

Thickness of butt straps

outer 1 3/32" ✓

inner 1 3/32" ✓

No. and Description of Furnaces in each Boiler

3 Deightons 3cf.

Material

Steel ✓

Tensile strength

26/30

Smallest outside diameter

46 1/16" ✓

Length of plain part

top ✓

bottom ✓

Thickness of plates

crown 1 1/2" ✓

bottom 3/32" ✓

Description of longitudinal joint

welded ✓

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

✓

Working pressure of furnace by Rules

185 lbs

End plates in steam space: Material

Steel ✓

Tensile strength

26/30

Thickness

1 3/32" ✓

Pitch of stays 22 1/2 x 15 1/2

How are stays secured

Double nuts ✓

Working pressure by Rules

186 lbs

Tube plates: Material

front Steel ✓

back Steel ✓

Tensile strength

26/30

Thickness

13/16" centre 3/4" wings ✓

Mean pitch of stay tubes in nests

9 3/8" ✓

Pitch across wide water spaces

13 1/2" ✓

Working pressure

front 204 lbs

back 208 lbs

Girders to combustion chamber tops: Material

Steel ✓

Tensile strength

28/32 ✓

Depth and thickness of girder

at centre

8 3/8" x 1 1/2" ✓

Length as per Rule

32 3/16" ✓

Distance apart

9" ✓

No. and pitch of stays

in each

2

10" ✓

Working pressure by Rules

195 lbs

Combustion chamber plates: Material

Steel ✓

Tensile strength

26/30

Thickness: Sides

23/32 ✓

Back

19/32 ✓

Top

13/16" ✓

Centre 21/32" ✓

Bottom

23/32" ✓

Pitch of stays to ditto: Sides

10" x 8 1/2" ✓

Back

8" x 8 1/4" ✓

Top

9" x 10" ✓

8" x 10" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

210 lbs

Front plate at bottom: Material

Steel ✓

Tensile strength

26/30

Thickness

13/16" ✓

Thickness

27/32" ✓

Lower back plate: Material

Steel ✓

Tensile strength

26/30

Thickness

13/16" ✓

Pitch of stays at wide water space

13 1/2" x 8" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

218 lbs

Main stays: Material

Steel ✓

Tensile strength

28/32" ✓

3 1/2" dia 15 1/2" x 22 1/2"

Diameter

At body of stay, or Over threads

3" x 2 3/4" ✓

No. of threads per inch

6 ✓

Area supported by each stay

2 1/4" - 20" x 14 3/4"

Working pressure by Rules

192 lbs

Screw stays: Material

Steel ✓

Tensile strength

26/30

Diameter

At turned off part, or Over threads

1 1/2" ✓

No. of threads per inch

9 ✓

Area supported by each stay

8" x 8 1/4"

Working pressure by Rules 190 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 3/4" or Over threads 1 3/4" ✓
No. of threads per inch 9 Area supported by each stay 10 7/8" x 8" Working pressure by Rules 208 lbs
Tubes: Material Iron External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 5/16" 3/8" 1/2" No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 218 lbs Manhole compensation: Size of opening in
shell plate 13" x 16 1/2" Section of compensating ring 13 1/2" x 1 1/4" No. of rivets and diameter of rivet holes 32 1 1/4"
Outer row rivet pitch at ends 8 1/2" 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 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 23 inclusive for boilers been complied with yes

The foregoing is a correct description,
FOR RICHARDSON, WESTGARTH & CO. LIMITED. Manufacturer.

Dates of Survey { During progress of work in shops - - - 15.7.12, 2.8.12, 9.12.14, 19.22.24.28.30. Oct. 4.7.12, 8.7.19. Are the approved plans of boiler and superheater for use at present? yes.
while building { During erection on board vessel - - - 2.5.27.28. 16.2.3.5.18.14.7.18.21.25. Dec. 1.2.5.6.9.
Total No. of visits 36.

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

These boilers have been built under Special Survey.
The materials and workmanship are good & efficient.
On completion they satisfactorily withstood the hydraulic test. They are being despatched to Sunderland for fitting on board.

The boiler mountings have been examined and tested with a hydraulic pressure of 400 lbs per sq. inch.
These boilers have been satisfactorily fitted in the vessel & the safety valves adjusted under steam.
For recommendation regarding notation see machinery report.

Survey Fee ... £ : : When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

To be changed at Sunderland

R.D. Shilston, A. Daintith.
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute

TUES. 21 FEB 1928

Assigned

See Sd B. rpt. No 29638



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