

REPORT ON BOILERS.

No. 96422

JUL -9 1938

Date of writing Report

10

When handed in at Local Office

8/7/38

Received at London Office

Port of **NEWCASTLE-ON-TYNE**

No. in Reg. Book. Survey held at

Newcastle-on-Tyne

Date, First Survey 27 Sept 1937

Last Survey

7th July

1938.

on the

"SAN DELFINO"

(Number of Visits)

Gross
Tons
Net

Master

Built at

Haverton Hill-on-Dees

By whom built

Furness S. B. Co Ltd

Yard No.

283.

When built

1938.

Engines made at

Newcastle-on-Tyne (S. B. Co Ltd)

By whom made

R. W. Hawthorn Leslie & Co Ltd

Engine No.

3941

When made

1938.

Boilers made at

Newcastle-on-Tyne (S. B. Co Ltd)

By whom made

R. W. Hawthorn Leslie & Co Ltd

Boiler No.

3941

When made

1938.

Nominal Horse Power

502.

Owners

Eagle Oil & Shipping Co Ltd

Port belonging to

London.

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel (Plates) The Steel Company of Scotland (Furnaces) Deighton & Co Ltd

(Letter for Record

5.

Total Heating Surface of Boilers

3896 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

oil.

No. and Description of Boilers

2 Single Ended (Dry Back)

Working Pressure

180 lbs/sq in

Tested by hydraulic pressure to

320 lbs

Date of test

S. 6-6-38

No. of Certificate

S. 781

Can each boiler be worked separately

Yes.

Area of Firegrate in each Boiler

12.5 sq ft

No. and Description of safety valves to each boiler

2. Spring loaded. (Double)

Area of each set of valves per boiler

per Rule

14.14 sq ft

Pressure to which they are adjusted

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

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

12' - 11 3/4"

Length

11' - 0"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

neither

Description of riveting: circ. seams

end

DR lap

inter.

Pitch of rivets

3.12"

long. seams

1 1/4"

Percentage of strength of circ. end seams

plate

rivets

66%

Percentage of strength of circ. intermediate seam

plate

rivets

86.3%

Percentage of strength of longitudinal joint

plate

rivets

85.4%

combined

89.7%

Working pressure of shell by Rules

182 lbs/sq in

Thickness of butt straps

outer

25/32"

inner

29/32"

No. and Description of Furnaces in each Boiler

2 Corrugated Morrison Section.

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

41 1/2"

Length of plain part

top

bottom

Thickness of plates

crown

1 1/2"

bottom

1 1/2"

Description of longitudinal joint

welded.

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

none.

Working pressure of furnace by Rules

187 lbs/sq in

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/4"

Pitch of stays

18" x 15"

How are stays secured

Double nuts.

Working pressure by Rules

189 lbs/sq in

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26-30 tons

Thickness

1 1/4"

Mean pitch of stay tubes in nests

8 9/16"

Pitch across wide water spaces

14 1/2" x 3 3/4"

Working pressure

front

195 lbs/sq in

back

195 lbs/sq in

Girders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder

at centre

Length as per Rule

Distance apart

in each

Working pressure by Rules

Combustion chamber plates: Material **EXTERNAL COMBUSTION CHAMBER.**

Tensile strength

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

Are stays fitted with nuts or riveted over

Working pressure by Rules

15/16"

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

15/16"

Pitch of stays at wide water space

14 1/2" x 3 3/4"

Are stays fitted with nuts or riveted over

no.

Working Pressure

195 lbs/sq in

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay,

or

Over threads

2 3/4"

No. of threads per inch

6

Area supported by each stay

270 sq in

Working pressure by Rules

15/16"

Screw stays: Material

None.

Tensile strength

270 sq in

Diameter

At turned off part,

or

Over threads

2 3/4"

No. of threads per inch

6

Area supported by each stay

270 sq in

W120-0095

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Lloyd's Register
Foundation

Working pressure by Rules ☒ Are the stays drilled at the outer ends ☒ Margin stays: Diameter ☒ At turned off part, ☒ Over threads.

No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by Rules ☒

Tubes: Material Steel External diameter ☒ Plain 2 1/2" Thickness ☒ 9 WG No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules Plain 230 lb/sq. in. Stay 208 lb/sq. in. Manhole compensation: Size of opening in shell plate 21" x 17" Section of compensating ring 19 1/8" x 1" No. of rivets and diameter of rivet holes 34 @ 1 3/16"

Outer row rivet pitch at ends 8" x 4 1/2" Depth of flange if manhole flanged 3 1/2" 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

How connected to shell Inner radius of crown Working pressure by Rules

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 forgings ☒ 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 forgings and 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 Yes

The foregoing is a correct description,
W. HAWTHORN, LESLIE & CO. LIMITED Manufacturer.

Dates of Survey ☒ During progress of work in shops - - ☒ Are the approved plans of boiler and superheater forwarded herewith Yes
☒ while building ☒ During erection on board vessel - - - (If not state date of approval.)
See Indel Report 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.)
These boilers have been built under Special Survey in accordance with the Society's Rules and approved plan.
The materials & workmanship are good.

These boilers have been sent to Messrs Furness S.B. & Ltd
Haverton Hill - on - 2ess to be fitted on board.

Survey Fee ... £ 7 2s
 Travelling Expenses (if any) £ See Indel Report

When applied for, 19
 When received, 19

L. Pickett
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 18 OCT 1938
 Assigned See minute or L.C. machinery