

REPORT ON BOILERS.

No. 13536

Received at London Office

21 JUN 1943

Date of writing Report

19

When handed in at Local Office

19

Port of Belfast.
Visits included in 7. E. report.

No. in Survey held at

Belfast.

Date, First Survey

Last Survey

19

Reg. Book.

on the

M.V. "NARICA"

(Number of Visits

Gross 8213
Net 4776

Built at

Belfast.

By whom built

Harland & Wolff Ltd.

Yard No. 1173

When built 1943

Engines made at

Belfast.

By whom made

Harland & Wolff Ltd.

Engine No. 1158

When made 1943

Boilers made at

Belfast.

By whom made

Harland & Wolff Ltd.

Boilers No. 1173

When made 1943

Nominal Horse Power

502

Owners

Anglo Saxon Petroleum Co Ltd.

Port belonging to

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

Manufacturers of Steel

Colville Ltd.

(Letter for Record

3

Total Heating Surface of Boilers

1160 sq ft.

Is forced draught fitted

yesCoal or Oil fired OIL & EXH. GAS

No. and Description of Boilers

Two single ended cylindrical multitubular

Working Pressure

180 lbs/sq

Tested by hydraulic pressure to

320 lbs/sq

Date of test

25/1.43

No. of Certificate

1222

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One 2 1/4" double spring improved high lift

Area of each set of valves per boiler

per Rule

13.3 sq

as fitted

7.95 sq

Pressure to which they are adjusted

180 lbs/sq

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

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Separate Boiler House

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

12'-9 1/2"

Length

12'-3"

Shell plates: Material

Steel

Tensile strength

29/33 tons

Thickness

1 3/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

long. seams

TR DBS.

Diameter of rivet holes in

circ. seams

1 3/32"

long. seams

1 3/32"

Pitch of rivets

3.04"7.5"

Percentage of strength of circ. end seams

plate

64

rivets

47

Percentage of strength of circ. intermediate seam

plate

85.4

rivets

89.2

Percentage of strength of longitudinal joint

plate

85.4

rivets

89.2

combined

88.6working pressure of shell by rules. 180 lbs/sq

Thickness of butt straps

outer

1 3/16"

inner

1 5/16"

No. and Description of Furnaces in each Boiler

Two Corrugated "horizon" section.

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

44 1/8"

Length of plain part

top

✓

bottom

✓

Thickness of plates

crown

9/16"

bottom

Description of longitudinal joint

Line weld.

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

End plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1 1/16"

Pitch of stays

various

How are stays secured

nuts and washers inside and outside

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26/30 tons26/30 tons

Thickness

7/8"1 3/16"

Mean pitch of stay tubes in nests

9.1

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

9 3/4" x 2 x 7/8"

Length as per Rule

35.4"

Distance apart

11"

No. and pitch of stays

in each

3 @ 8 3/4"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"3/4"

Pitch of stays to ditto: Sides

7 3/4" x 8 3/4"

Back

8 3/8" x 8 1/4"

Top

11" x 8 3/4"

Are stays fitted with nuts or riveted over

riveted over.

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

7/8"

Pitch of stays at wide water space

13"

Are stays fitted with nuts or riveted over

riveted over.

Main stays: Material

Steel

Tensile strength

28/32 tons

Diameter

At body of stay,

2 1/2"

or

2 3/4"

No. of threads per inch

10 (water space)6 (steam space)

Screw stays: Material

Steel

Tensile strength

26/30 tons

Diameter

At turned off part,

1 1/2"

or

1 3/4"2"

No. of threads per inch

9

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Are the stays drilled at the outer ends

Margin stays: Diameter { At turned off part, $1\frac{3}{4}$ "
or
Over threads

No. of threads per inch

Tubes: Material *brought iron* External diameter { Plain $2\frac{3}{4}$ "
Stay $2\frac{3}{4}$ " Thickness { $\frac{9}{16}$ " $\frac{5}{16}$ " $\frac{3}{8}$ " No. of threads per inch 9

Pitch of tubes $4' \times 3\frac{7}{8}"$

Manhole compensation: Size of opening in

shell plate $16\frac{1}{2} \times 12\frac{1}{2}"$ Section of compensating ring $2[10 \times \frac{7}{8} + (1 \times 1)]$ No. of rivets and diameter of rivet holes 28 @ $1\frac{1}{32}"$

Outer row rivet pitch at ends $9\frac{3}{4}"$ Depth of flange if manhole flanged $3\frac{3}{8}"$ in end plate. Steam Dome: Material

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 Thickness of crown No. and diameter of

stays Inner radius of crown

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

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

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

The foregoing is a correct description,

Manufacturer.

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

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

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 constructed under special survey in accordance with the Society's Rules and the approved plans. The materials and workmanship are good. The boilers have been efficiently installed on board the vessel, all safety valves adjusted under steam and accumulation test carried out with satisfactory results.*

Survey Fee £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 6 JUL 1943

Committee's Minute

Assigned

See p. machy rpl.



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