

REPORT ON BOILERS.

No. 3495
(C. 900)

10 DEC 1945

of writing Report

19

When handed in at Local Office 6th December 1945

Received at London Office

Port of **SUNDERLAND**

in Survey held at

SUNDERLAND.

Date, First Survey

see Rpx 4

Last Survey

19

on the

3/8 "MILLION COVE."

(Number of Visits)

Gross 1566.41
Net 5268.69

at

SUNDERLAND.

By whom built

BARTRAMS.

Yard No. 301. When built 1945.

ines made at

GLASGOW.

By whom made

DUNCAN STEWART & CO. LTD.

Engine No. 147. When made 1945.

ers made at

SUNDERLAND.

By whom made

NORTH EASTERN MARINE ENG. & LTD.

Boiler No. 4078. When made 1945.

inal Horse Power

509

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

POLYVILLES, LTD.

al Heating Surface of Boilers

7248 sq. ft.

Is forced draught fitted

YES.

(Letter for Record

S.

and Description of Boilers

3— SINGLE-ENDED MULTITUBULAR.

Working Pressure

220 LBS/SQ. IN.

ed by hydraulic pressure to

380 LBS/SQ. IN.

Date of test

18.7.44.

No. of Certificate

4556.

4557.

4558.

Can each boiler be worked separately

YES.

a of Firegrate in each Boiler

55 sq. ft.

No. and Description of safety valves to each boiler

6.52 sq. in.

7.95 sq. in.

Pressure to which they are adjusted

220 LBS/SQ. IN.

Are they fitted with easing gear

YES.

of each set of valves per boiler

per Rule

as fitted

6.52 sq. in.

7.95 sq. in.

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

YES.

llest distance between boilers or uptakes and bunkers or woodwork

2'-0".

Is oil fuel carried in the double bottom under boilers

NO.

llest distance between shell of boiler and tank top plating

2'-0".

Is the bottom of the boiler insulated

YES.

est internal dia. of boilers

15'-0 1/2".

Length

11'-8 3/4".

Shell plates: Material

STEEL.

Tensile strength

29/33 T.

ickness

1 15/32".

Are the shell plates welded or flanged

NO.

Description of riveting: circ. seams

end

D.R. LAP.

inter.

4 1/8".

seams

T.R. D.B.S.

Diameter of rivet holes in

circ. seams

1 1/2".

long. seams

1 1/2".

Pitch of rivets

10 3/8".

centage of strength of circ. end seams

plate

63.6. %

rivets

46.1. %

Percentage of strength of circ. intermediate seam

plate

85.5. %

rivets

86.2. %

centage of strength of longitudinal joint

plate

85.5. %

rivets

86.2. %

combined

88.3. %

Thickness of butt straps

outer

1 1/8".

inner

1 1/4".

ickness of butt straps

outer

1 1/8".

inner

1 1/4".

No. and Description of Furnaces in each Boiler

3—

DEIGHTON TYPE.

ickness of butt straps

outer

1 1/8".

inner

1 1/4".

Tensile strength

26/30 T.

Smallest outside diameter

3'-9 3/4".

ickness of butt straps

outer

1 1/8".

inner

1 1/4".

Thickness of plates

crown

1 1/16".

bottom

1 1/16".

Description of longitudinal joint

FIRE-WELD.

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

plates in steam space: Material

STEEL.

Tensile strength

26/30 T.

Thickness

1 13/32".

Pitch of stays

1'-7 5/8" x 1'-7 3/4".

are stays secured

DOUBLE NUTS.

plates: Material

front

STEEL.

Tensile strength

24/30 T.

Thickness

15/16".

back

STEEL.

25/32".

pitch of stay tubes in nests

9 13/32".

Pitch across wide water spaces

14".

ers to combustion chamber tops: Material

STEEL.

Tensile strength

28/32 T.

Depth and thickness of girder

10 1/2" x 1 3/8".

Length as per Rule

2'-9 7/16".

entre

10 1/2" x 1 3/8".

Distance apart

9 1/4".

No. and pitch of stays

3 @ 8".

Combustion chamber plates: Material

STEEL.

Thickness: Sides

1 1/16".

Back

25/32".

le strength

26/30 T.

Top

1 1/16".

Bottom

7/8".

Are stays fitted with nuts or riveted over

NUTS.

of stays to ditto: Sides

9 1/4" x 8".

Back

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

Top

9 1/4" x 8".

Are stays fitted with nuts or riveted over

NUTS.

plate at bottom: Material

STEEL.

Tensile strength

26/30 T.

ness

15/16".

Lower back plate: Material

STEEL.

Tensile strength

26/30 T.

Thickness

15/16".

of stays at wide water space

14 1/8" x 9 7/8".

Are stays fitted with nuts or riveted over

NUTS.

stays: Material

STEEL.

Tensile strength

28/32 T.

At body of stay,

3 1/8".

Over threads

3 1/2".

No. of threads per inch

6.

stays: Material

STEEL.

At turned off part,

1 7/8".

Over threads

1 7/8".

No. of threads per inch

9.

Tensile strength

26/30 T.

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004721-004724-0240

Are the stays drilled at the outer ends ☒ No. 9. Margin stays: Diameter 2" { At turned off part, or Over threads }
No. of threads per inch 9.
Tubes: Material STEEL. External diameter { Plain 3" Stay 3" } Thickness { 8. w.g. 3/8" 5/16" } No. of threads per inch 9.
Pitch of tubes 4 1/4" x 4 1/8" Manhole compensation: Size of opening 4"
shell 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 1/4" 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 3"
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 NORTH EASTERN SMOKE TUBE. Manufacturers of { Tubes TALBOT STEAD. Steel forgings APPLEBY FRODINGHAM STEEL COY. Steel castings ✓ }
Number of elements 177 Material of tubes SOLID DRANK STEEL. Internal diameter and thickness of tubes 15 1/4" x 2 1/2 1/4"
Material of headers 12 - FORGED STEEL. Tensile strength 26/30 T. 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 3.14 sq. ft. Are the safety valves fitted with easing gear YES.
Pressure to which the safety valves are adjusted 220 LBS/SQ. IN. Hydraulic test pressure ✓
tubes 1500 LBS/SQ. IN. forgings and castings 660 LBS/SQ. IN. and after assembly in place 500 LBS/SQ. IN. Are drain cocks ✓
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. NORTH EASTERN MARINE ENGINEERING CO. (1988)

The foregoing is a correct description, W. H. J. Manufacturer

Dates of Survey { During progress of work in shops - - } see Rpt 4 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - }
Total No. of visits ✓

Is this Boiler a duplicate of a previous case ✓ If so, state Vessel's name and Report No. ✓

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, Secretary's Letter, and the Requirements of the Rules.
The workmanship and materials are good.

Survey Fee ... £ see Rpt 4 When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

W. H. J. pp. L.R. HORN
Engineer Surveyor to Lloyd's Register of Shipping
5-12-47.

Committee's Minute

GLASGOW 13 APR 1948

Assigned

SEE ACCOMPANYING MACHINERY REPORT



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