

DONKEY REPORT ON BOILERS

No. 94319

23 OCT 1936

Received at London Office

NEWCASTLE ON TYNE

Writing Report

19

When handed in at Local Office

21.10.36 Port of

in
Book.

Survey held at

Newcastle on Tyne

Date, First Survey

9 March

Last Survey

21/10/ 1936

on the

Motor Tanker SEPIA.

(Number of Visits)

Tons

Gross 6214
Net 3620

er

Built at Newcastle

By whom built

Swan Hunter & Wigham

Yard No. 1519

When built 1936

nes made at

Newcastle

By whom made

R. & W. Hawthorn, Leslie & Co. Ltd

Engine No. 3879

When made 1936

Key

made at

Newcastle

By whom made

Swan Hunter & Wigham Richardson Ltd

Boiler No. 1524

When made 1936

inal Horse Power

171. = $\frac{2565 \text{ sq ft}}{15}$

Owners

Anglo Saxon Petroleum Co. Ltd

Port belonging to LONDON

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Coy of Scotland, Furnace Plates by Parkhead

Iron & Steel Co., Rotherham.

(Letter for Record)

Heating Surface of Boilers

2565 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil fired & waste heat

and Description of Boilers

One 3 furnace multitubular Scotch

Working Pressure 180 lb/sq

ed by hydraulic pressure to

320 lb

Date of test

21-8-36

No. of Certificate

685

Can each boiler be worked separately

Yes

a of Firegrate in each Boiler

Oil fired

No. and Description of safety valves to each boiler

Two Spring Loaded High Lift Type

a of each set of valves per boiler

per Rule

9.61

as fitted

9.8

Pressure to which they are adjusted

180 lb

Are they fitted with easing gear

Yes

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

No main Boilers (Oil Engines)

allest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Boiler is on flat above ER.

allest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

greatest internal dia. of boilers

14' 5 3/16"

Length

11' 4 1/2"

Shell plates: Material

M. Steel

Tensile strength 29-33 tons

Thickness

1 5/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

dble riv. overlap

7. seams

trib. riveted
dble butt straps

Diameter of rivet holes in

circ. seams

1 5/16"

Pitch of rivets

4' 4 1/7"

Percentage of strength of circ. end seams

plate

70.28%

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.60%

Working pressure of shell by Rules

182 lb/sq

Thickness of butt straps

outer

7/8"

No. and Description of Furnaces in each Boiler

3 Morrison Susp. Furnaces

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3' 8 3/8"

Length of plain part

top

8 3/4"

Thickness of plates

crown

9/16"

Description of longitudinal joint

bottom

1" (c.c. butt)

Description of longitudinal joint

Fire welded

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

none

Working pressure of furnace by Rules

184 lb.

nd plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/8"

Pitch of stays 19" x 16 3/4"

ow are stays secured

Screwed thro plates, & nuts inside & outside

Working pressure by Rules

182 lb.

be plates: Material

front

Steel

Tensile strength

26 to 30 tons

Thickness

1 3/16"

ean pitch of stay tubes in nests

9.726"

Pitch across wide water spaces

14 3/16" x 7 7/8"

Working pressure

front

189 lb.

back

249 lb.

rders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons

Depth and thickness of girder

centre

9" x 1 1/4"

each

3 at 8"

Length as per Rule

30 17/32"

Distance apart

9 1/2"

No. and pitch of stays

Tensile strength

26 to 30 tons

Thickness: Sides

3/4"

Back

2 5/32"

Top

3/4"

Bottom

1"

Pitch of stays to ditto: Sides

8" x 7 1/2"

Back

9 1/2" x 8 1/8"

Top

9 1/2" x 8"

Are stays fitted with nuts or riveted over

Riveted over.

Working pressure by Rules

190 lb.

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 5/16"

Pitch of stays at wide water space

14 1/2" x 8 1/2"

Are stays fitted with nuts or riveted over

with nuts

Working Pressure

256 lb (min)

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

At body of stay,

3" dia

No. of threads per inch

6

Area supported by each stay

(19 1/2" x 17 1/2") - 6.1

Working pressure by Rules

200 lb

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turned off part,

1 5/8" + 1 1/2"

No. of threads per inch

9

Area supported by each stay

1 5/8" = (9 1/2" x 8) - 1.7

1 1/2" = (8 x 7 1/2) - 1.45

Working pressure by Rules 205th Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, + or 1 7/8, 1 3/4, 1 Over threads }
No. of threads per inch 9 Area supported by each stay (9 x 9 1/2) - 1.7 Working pressure by Rules 186th
Tubes: Material IRON External diameter { Plain 2 3/4 O/D Stay 2 3/4 O/D Thickness { 9 W.G. 3/8, 5/16, 1/4 No. of threads per inch 9
Pitch of tubes 3 15/16 x 3 55/64 Working pressure by Rules 183th Manhole compensation: Size of open
shell plate 16" Section of compensating ring 21" x 1 5/32" No. of rivets and diameter of rivet holes 32 rivets 1 3/8"
Outer row rivet pitch at ends 9 7/8 Depth of flange if manhole flanged 2 3/4 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 ✓ 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
of rivets in outer row in dome connection to shell ✓

Type of Superheater ✓ 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
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 ✓
Rules ✓ Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure ✓
tubes ✓, castings ✓ and after assembly in place ✓ Are drain cocks or valves ✓
to free the superheater from water where necessary ✓

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes.

FOR The foregoing is a correct description,
SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

Dates of Survey { During progress of work in shops - - - See incl. Rebut Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 21/6
while building { During erection on board vessel - - - See incl. Rebut Total No. of visits ✓

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. ELONA Nov Rpt. 93417
MACTRA " " 93536

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

The Donkey Boiler has been constructed under special survey in accordance with the Rules and approved plan.
The materials and workmanship are good, and the boiler was found satisfactory under hydraulic test.
The Boiler has been fitted on board, and the Safety valves adjusted under steam, and the vessel is eligible for the notation DB. 180 lbs.

Survey Fee £ 17.2.0 When applied for, 19
Travelling Expenses (if any) £ 0.0.0 When received, 19

A. A. Watt.

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 30 OCT 1936

Assigned See Nov. 7.6.94319



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Foundation