

REPORT ON BOILERS.

No. 87673

of writing Report

19

When handed in at Local Office

23/10/31

Port of

Received at London Office

24 OCT 1931

NEWCASTLE-ON-TYNE

in Survey held at

St. Peter's

Date, First Survey

3 April 30

Last Survey

14 Oct.

1931

on the *Two donkey boilers for the T. S. M. V. "CAPSA"*

(Number of Visits)

8229

Tons

4826

Built at

Hebburn.

By whom built

Hawthorn Leslie & Co.

No. 580

When built 1931.

Furnaces made at

St. Peter's.

By whom made

Hawthorn Leslie & Co. Ltd.

Engine No. 3782

When made 1931.

Boilers made at

St. Peter's

By whom made

Hawthorn Leslie & Co.

Boiler No. 3782

When made 1931.

Nominal Horse Power

413.3.

Owners

Anglo Saxon Pet. Co.

Port belonging to

London.

LITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Co. of Scotland, D. Colville & Son

(Letter for Record)

8.

Heating Surface of Boilers

1139 sq. ft. each boiler

Is forced draught fitted

Yes

Coal or Oil fired

Oil

and Description of Boilers

Two cylindrical marine

Working Pressure

150 lbs.

Tested by hydraulic pressure to

245 lbs.

Date of test

4.11.30.

No. of Certificate

516

Can each boiler be worked separately

Yes

of Firegrate in each Boiler

-

No. and Description of safety valves to each boiler

4.682

Two springloaded

1. H.L.

of each set of valves per boiler

per Rule

as fitted

9.955

Pressure to which they are adjusted

150 lbs.

Are they fitted with easing gear

Yes

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

-

Least distance between boilers or uptakes and bunkers or woodwork

2'-10"

Is oil fuel carried in the double bottom under boilers

Least distance between shell of boiler and tank top plating

in main deck

Is the bottom of the boiler insulated

Yes

Least internal dia. of boilers

10'-6"

Length

10'-6"

Shell plates: Material

S.

Tensile strength

30/33 T.

Thickness

35/32

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

D. R. Lap

seams

T. R. D. B. S.

Diameter of rivet holes in

circ. seams

1"

Pitch of rivets

3"

Percentage of strength of circ. end seams

plate

66.6.

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

80.5.

Working pressure of shell by Rules

160 lbs.

Thickness of butt straps

outer

11/16"

inner

13/16"

No. and Description of Furnaces in each Boiler

2 Morrison Section

Material

S.

Tensile strength

26/30 T.

Smallest outside diameter

33 7/8"

Thickness of plain part

top

-

bottom

Thickness of plates

crown

3 1/16"

Description of longitudinal joint

Weld

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

Working pressure of furnace by Rules

193 lbs.

Plates in steam space: Material

S.

Tensile strength

26/30 T.

Thickness

29/32"

Pitch of stays

15 1/2" x 15"

Are stays secured

to girders

Working pressure by Rules

162 lbs.

Plates: Material

front

Steel

back

Tensile strength

26/30 T.

Thickness

29/32"

Pitch of stay tubes in nests

4 1/8" x 4 1/8"

Pitch across wide water spaces

13 1/8"

Working pressure

front

201 lbs.

back

340 lbs.

Stays to combustion chamber tops: Material

S.

Tensile strength

28/32 T.

Depth and thickness of girder

Length as per Rule

25 1/2"

Distance apart

4 1/2"

No. and pitch of stays

Working pressure by Rules

168 lbs.

Combustion chamber plates: Material

S.

Thickness: Sides

21/32"

Back

21/32"

Top

21/32"

Bottom

21/32"

of stays to ditto: Sides

8" x 4 1/2"

Back

8 1/4" x 4 1/4"

Top

8" x 4 1/2"

Are stays fitted with nuts or riveted over

Discontinued.

Working pressure by Rules

166 lbs.

Front plate at bottom: Material

S.

Tensile strength

26/30 T.

Lower back plate: Material

S.

Tensile strength

26/30 T.

Thickness

29/32"

of stays at wide water space

15" x 4 1/4"

Are stays fitted with nuts or riveted over

M. girders - riveted.

Working Pressure

148 lbs.

Main stays: Material

S.

Tensile strength

28/32 T.

At body of stay,

or

Over threads

No. of threads per inch

6

Area supported by each stay

232 sq. in.

Working pressure by Rules

169 lbs.

Screw stays: Material

S.

Tensile strength

26/30 T.

At turned off part,

or

Over threads

No. of threads per inch

9

Area supported by each stay

605 sq. in.

002524-002535-0254

Working pressure by Rules 16822. Are the stays drilled at the outer ends yes Margin stays: Diameter 1 5/8"
No. of threads per inch 9 Area supported by each stay 8435 Working pressure by Rules 14822
Tubes: Material Iron External diameter 2 3/4" Thickness 9/16" No. of threads per inch 9
Pitch of tubes 3 1/2" x 3 1/2" Working pressure by Rules 21522 Manhole compensation: Size of opening 1 1/2"
shell plate 21 x 14" Section of compensating ring 8" x 29/32" No. of rivets and diameter of rivet holes 36 @ 1 1/2"
Outer row rivet pitch at ends 6 1/8" Depth of flange if manhole flanged 3 1/2" Steam Dome: Material Iron
Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint _____
Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter _____
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 _____ For _____
The foregoing is a correct description, _____
GENERAL MANAGER. _____

Dates of Survey { During progress of work in shops - - } See Michy Report Are the approved plans of boiler and superheater forwarded herewith _____
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.) The Boilers have been built under Special Survey in accordance with the approved plan. The Rules of the Society have now been securely fitted on board the vessel & their safety valves adjusted under steam to working pressure. The workmanship & materials are of good quality throughout

Survey Fee ... £ 40 When applied for, 19
Travelling Expenses (if any) £ Repat When received, 19
Chas. A. Ferguson
Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute TUE. 27 OCT 1931
Assigned See F.C. Rep.