

REPORT ON BOILERS.

No. 14345

Received at London Office 11 APR 1947

Date of writing Report

19

When handed in at Local Office

9/4/10

47

Port of

BELFAST.

No. in Survey held at

BELFAST.

Date, First Survey

Last Survey

19

on the

M.V. LINGULA

(Number of Visits)

Gross 6445

Tons

Net 3618.

Master

Built at

BELFAST

By whom built

HARLAND & WOLFF LTD.

Yard No. 1347

When built 1947.

Engines made at

BELFAST

By whom made

HARLAND & WOLFF LTD.

Engine No. 1347

When made 1947

Boilers made at

BELFAST

By whom made

HARLAND & WOLFF LTD.

Boiler No. 1360

When made 1947.

Nominal Horse Power

536

Owners

ANGLO SAXON PETROLEUM CO.

Port belonging to

LONDON.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

COLVILLES.

(Letter for Record S. ✓)

Total Heating Surface of Boilers

3540

Is forced draught fitted

YES.

Coal or Oil fired

OIL OR

EXHAUST GAS.

No. and Description of Boilers

ONE CYLINDRICAL, SMOKE TUBE TYPE

Working Pressure 180 lbs./sq. in.

Tested by hydraulic pressure to 320 lbs./sq. in.

Date of test

15/10/46

No. of Certificate

1360

Can each boiler be worked separately

—

Area of Firegrate in each Boiler

—

No. and Description of safety valves to each boiler

DOUBLE 3" DIA. M.P. HIGH LIFT.

Area of each set of valves per boiler

per Rule 11.35 Sq. ins.

as fitted 14.15 Sq. ins.

Pressure to which they are adjusted

185 lbs./sq. in.

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

AMPLE.

Is oil fuel carried in the double bottom under boilers

TWEEN/DK.

Smallest distance between shell of boiler and tank top plating

—

Is the bottom of the boiler insulated

YES.

Largest internal dia. of boilers

16'-0" 13/32"

Length

12'-6"

Shell plates: Material

STEEL

Tensile strength 29/33 T/□"

Thickness

1 19/64"

Are the shell plates welded or flanged

NO.

Description of riveting: circ. seams

end D.R.L.

Long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 13/32"

long. seams

1 13/32"

Pitch of rivets

3-27"

9 1/16"

Percentage of strength of circ. end seams

plate 57.2%

rivets 58%

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 84.5%

rivets 98%

combined 88.5%

Working pressure of shell by Rules

183 lbs./sq. in.

Thickness of butt straps

outer 1"

inner 1 1/8"

No. and Description of Furnaces in each Boiler

3 - CORRUGATED MORISON SECTION.

Material

STEEL.

Tensile strength

26/30 T/□"

Smallest outside diameter

3'-11 1/4"

Length of plain part

top —

bottom —

Thickness of plates

crown

5/8"

Description of longitudinal joint

FORGE WELD.

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

—

Working pressure of furnace by Rules

193 lbs./sq. in.

End plates in steam space: Material

STEEL

Tensile strength

26/30 T/□"

Thickness

1 5/32"

Pitch of stays

VARIOUS.

How are stays secured

NUTS & WASHERS.

IN & OUT.

Working pressure by Rules

AS APPROVED.

Tube plates: Material

front STEEL.

back STEEL.

Tensile strength

26/30 T/□"

Thickness

7/8"

27/32"

Lean pitch of stay tubes in nests

8.84"

Pitch across wide water spaces

1'-2"

Working pressure

front

back AS APPROVED.

Girders to combustion chamber tops: Material

STEEL.

Tensile strength

28/32 T/□"

Depth and thickness of girder

At centre 2 @ 10 1/4" x 7/8"

Length as per Rule

3'-1 2/32"

Distance apart

10 1/2"

No. and pitch of stays

In each 3 @ 8 7/8"

Working pressure by Rules AS APPROVED.

Combustion chamber plates: Material

STEEL.

Tensile strength

26/30 T/□"

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

13/16"

Pitch of stays to ditto: Sides

8 7/8" x 7 1/4"

Back

8 1/4" x 7 3/4"

C. Top

—

Are stays fitted with nuts or riveted over

OTHERS RIVETED.

Working pressure by Rules

AS APPROVED.

Front plate at bottom: Material

STEEL

Tensile strength

26/30 T/□"

Thickness

7/8"

Lower back plate: Material

STEEL.

Tensile strength

26/30.

Thickness

7/8".

Pitch of stays at wide water space

1'-1"

Are stays fitted with nuts or riveted over

NUTS.

Working Pressure

AS APPROVED.

Main stays: Material

STEEL.

Tensile strength

28/32 T/□"

Diameter

At body of stay,

3"

Over threads

No. of threads per inch

6

Area supported by each stay

VARIOUS.

Working pressure by Rules

AS APPROVED.

Screw stays: Material

Tensile strength

Diameter

At turned off part,

1 1/2", 1 3/4", 2"

Over threads

No. of threads per inch

9

Area supported by each stay

VARIOUS.

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Working pressure by Rules **AS APPROVED** Are the stays drilled at the outer ends **NO** Margin stays: Diameter ^{At turned off part,} ^{or} ^{Over threads} **1 3/4"**

No. of threads per inch **9** Area supported by each stay **-** Working pressure by Rules **AS APPROVED**

Tubes: Material **STEEL** External diameter ^{Plain} **2 3/4"** ^{Stay} **2 3/4"** Thickness ^{9 L.S.G.} **1/4", 5/16", 1/2"** No. of threads per inch **9**

Pitch of tubes **4" x 3 7/8"** Working pressure by Rules **AS APPROVED** Manhole compensation: Size of opening **-**

shell plate **16 1/2" x 12 1/2"** Section of compensating ring **20" x 1 1/8"** No. of rivets and diameter of rivet holes **28 @ 1 15/32"**

Outer row rivet pitch at ends **9 3/4"** Depth of flange if manhole flanged **3 3/8" (FROM END)** 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 **-**

stays **-** Inner radius of crown **-** Working pressure by Rules **-**

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

Number of elements **-** Material of tubes **-** Manufacturers of ^{Tubes} **-** ^{Steel castings} **-** 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 as **-**

Rules **-** Pressure to which the safety valves are adjusted **-** Hydraulic test pressure **-**

tubes **-** 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,

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 **YES** If so, state Vessel's name and Report No. **M.V. LEPTON** **Rel. Rpt. No. 14332**

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

This boiler has been built under Special Survey in accordance with the Rules and approved plan. The materials and workmanship are good. The boiler has been efficiently installed on board the vessel, the safety valves adjusted under steam for a working pressure of 180 lbs./sq. and a satisfactory accumulation test held. The oil burning installation, remote controls and steam fire extinguishing system have been tried and found satisfactory.

Survey Fee **See machinery report.**

When applied for, **19**

Travelling Expenses (if any) **£**

When received, **19**

Committee's Minute

FILE 9 MAY 1947

Assigned

See F.E. machy. rpt.

Edwin Grieves for self and J. M. Afee
Engineer Surveyor to Lloyd's Register of Shipping



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