

## REPORT ON BOILERS.

No. 50041

JUN 20 1939

Received at London Office

Date of writing Report

19

When made in at Local Office

19 JUN 1939

Port of

HULL

No. in Survey held at  
Reg. Book.

Date, First Survey

16.2.39

Last Survey

6.1939

6443 on the

S/R. "AKITA"

(STEAM TRAWLER)

(Number of Visits)

Tons

Gross 314.11

Net 115.90

Master

Built at

By whom built

Yard No. 1201

When built 1939

Engines made at

By whom made

Engine No. 667

When made 1939.6

Boilers made at

By whom made

Boiler No. 667

When made 1939.6

Nominal Horse Power

124.5

Owners

Munn. Head &amp; West Ltd. Port belonging to Cardiff

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley - Fordingham Steel Co. Ltd.

(Letter for Record)

S

Total Heating Surface of Boilers

2000 sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

1 S.B.

Working Pressure

200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test

25.4.39

No. of Certificate

4009

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One main valve high lift.

Area of each set of valves per boiler

per Rule

11.11.37

Pressure to which they are adjusted

200 lbs.

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

18"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

13'-9 9/16"

Length

10'-11 1/2"

Shell plates: Material

Steel

Tensile strength

29/33 tons.

Thickness

1 7/32"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

inter.

long. seams

True rivets in outer row omitted.

Diameter of rivet holes in

circ. seams

1 1/4"

Pitch of rivets

3 3/4"

Percentage of strength of circ. end seams

plate

66.7

rivets

42.5

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.4

rivets

87.5

Working pressure of shell by Rules

201 lbs./sq. in.

Thickness of butt straps

outer

3/32"

inner

1/32"

No. and Description of Furnaces in each Boiler

2 L.F. Straight Top.

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

41 3/16"

Length of plain part

top

bottom

Thickness of plates

crown

19/32"

bottom

Description of longitudinal joint

Forge welded.

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

Working pressure of furnace by Rules

209 lbs./sq. in.

End plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1 1/8"

Pitch of stays

16 1/2" x 19 1/2"

How are stays secured

Crown, with a plate washer.

Working pressure by Rules

203 lbs./sq. in.

Tube plates: Material

front

Steel

back

Tensile strength

26/30 tons

Thickness

15/16"

Pitch of stays

7/8"

Mean pitch of stay tubes in nests

7 3/8"

Pitch across wide water spaces

13 1/2"

Working pressure

front

258

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33 tons

Depth and thickness of girder

at centre

Length as per Rule

32 9/16"

Distance apart

9"

No. and pitch of stays

in each

3 @ 8"

Working pressure by Rules

238 lbs./sq. in.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

9 1/4" x 8 1/2"

Back

9 1/4" x 8 1/2"

Top

8" x 9"

Are stays fitted with nuts or riveted over

nuts.

Working pressure by Rules

227.

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

15/16"

Pitch of stays at wide water space

13 1/2" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts.

Working Pressure

280 lbs./sq. in.

Main stays: Material

Steel

Tensile strength

28/32 tons

Diameter

At body of stay,

or

Over threads

3"

No. of threads per inch

6

Area supported by each stay

315 sq. in.

Working pressure by Rules

213 lbs./sq. in.

Screw stays: Material

Steel

Tensile strength

26/30 tons

Thickness

7/8"

Diameter

At turned off part,

or

Over threads

2"

1 7/8"

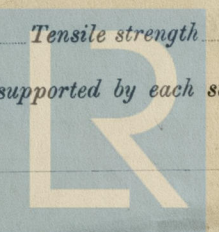
1 3/4"

No. of threads per inch

9

Area supported by each stay

81 sq. in.

Lloyd's Register  
Foundation

062923-06128-0120



Working pressure by Rules 224 lbs. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8" x 2"  
or  
Over threads 1 7/8" x 2"  
No. of threads per inch 9 Area supported by each stay 103 sq. in. Working pressure by Rules 209 lbs. / sq. in.  
Tubes: Material Iron External diameter { Plain 2 1/2" Thickness { 9/16" No. of threads per inch 9  
Stay 2 1/2" 7/16" x 5/16"  
Pitch of tubes 4 x 3 1/4" Working pressure by Rules 220 lbs. / sq. in. Manhole compensation: Size of opening in  
shell plate 16 x 12" Section of compensating ring 56 5/8" x 1" No. of rivets and diameter of rivet holes 94  
Outer row rivet pitch at ends 10 1/4" Depth of flange if manhole flanged ✓ Steam Dome: Material Steel  
Tensile strength 26,000 lbs. / sq. in. Thickness of shell 3/4" Description of longitudinal joint S.R. Lap.  
Diameter of rivet holes 1 1/2" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54%  
Rivets 43.6%  
Internal diameter 26" Working pressure by Rules 210 lbs. / sq. in. Thickness of crown 1" No. and diameter of  
stays 2 @ 2 1/2" Inner radius of crown ✓ Working pressure by Rules  
How connected to shell Single rivets Size of doubling plate under dome 1" x 56 5/8" Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell 1 1/4" x 10 1/4" pitch.

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 \_\_\_\_\_ Working pressure as per  
Rules \_\_\_\_\_ Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure  
tubes \_\_\_\_\_ forgings and castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks on  
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,  
For AMOS & SMITH LTD.

Manufactured by

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

See machinery report

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.)

This Boiler has been constructed under Special License & in  
accordance with the approved plans. The material & workmanship  
are sound & good.

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

A. R. Shaw  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See Lib 7 E 5004