

## REPORT ON BOILERS.

No. 44 377.

13 JAN 1934

Received at London Office

12 JAN 1934

Date of writing Report

19

When handed in at Local Office

10

Port of

HULL

No. in Survey held at  
eg. Book.

Hull

Date, First Survey 3rd Nov. 1933

Last Survey 10th Jan. 1934

1934

on the Steam Trawler "LADY ADELAIDE"

(Number of Visits)

Gross  
Tons  
Net

Master

Built at

Bewley

By whom built

Cook, Gellon &amp; Gennell Ltd

Yard No. 586

When built 1934

Engines made at

Hull

By whom made

Charles D.

Engine No. 451

When made 1934

Boilers made at

Hull

By whom made

Holmes &amp; Co. Ltd.

Boiler No. 451

When made 1934

Nominal Horse Power

102

Owners

J. H. H. &amp; Co. Limited, Trawlers

Port belonging to

Hull

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

Manufacturers of Steel

Appley &amp; Son, Steel &amp; Co. Ltd.

(Letter for Record S)

Total Heating Surface of Boilers

1866 sq. ft.

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended

Working Pressure 200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test

12.12.33

No. of Certificate

3878

Can each boiler be worked separately

Area of Firegrate in each Boiler

50.47 sq. ft.

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

per Rule

10.85 sq. ft.

as fitted

11.86

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

8"

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

141"

Length

128"

Shell plates: Material

Steel

Tensile strength

29/33 Tons.

Thickness

1 1/4"

Are the shell plates welded or flanged

Description of riveting: circ. seams

end

inter.

Long. seams

T.R. 58.8

Diameter of rivet holes in

circ. seams

1 5/16"

Pitch of rivets

3 3/4"

Percentage of strength of circ. end seams

plate

64.8

rivets

45.6

Percentage of strength of circ. intermediate seam

plate

85.45

rivets

Percentage of strength of longitudinal joint

plate

86.8

rivets

88.8

Working pressure of shell by Rules 201 lbs.

Thickness of butt straps

outer

3 1/2"

inner

1 3/2"

No. and Description of Furnaces in each Boiler

Three plain

Material

Steel

Tensile strength

26/30 Tons

Smallest outside diameter

42"

Length of plain part

top

80.5"

bottom

41"

Thickness of plates

crown

1 3/16"

bottom

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

201 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30 Tons

Thickness

1 7/8"

Pitch of stays 19" x 14 1/2"

How are stays secured

Double nuts &amp; washers

Working pressure by Rules

203 lbs.

Tube plates: Material

front

Steel

back

"

Tensile strength

26/30 Tons

Thickness

1 5/16"

7/8"

Mean pitch of stay tubes in nests

10.4"

Pitch across wide water spaces

14"

Working pressure

front

209 lbs.

back

205

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33 Tons

Depth and thickness of girder

at centre

10" x 13 1/4"

Length as per Rule

36 1/4"

Distance apart

9 1/2"

No. and pitch of stays

in each

3 @ 8 3/4"

Working pressure by Rules

209 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 Tons

Thickness: Sides

3/4"

Back

2 3/32"

Top

2 3/32"

Bottom

3/4"

Pitch of stays to ditto: Sides

9 1/2" x 9"

Back

9 1/2" x 8 3/8"

Top

9 1/2" x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

214 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30 Tons

Thickness

1 5/16"

Lower back plate: Material

Steel

Tensile strength

26/30 Tons

Thickness

2 7/32"

Pitch of stays at wide water space

14" x 8 7/16"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

208 lbs.

Main stays: Material

Steel

Tensile strength

28/32 Tons

Diameter

At body of stay,

3 1/4"

Over threads

No. of threads per inch

8

Area supported by each stay

332 sq. in.

Working pressure by Rules

241 lbs.

Screw stays: Material

Steel

Tensile strength

26/30 Tons

Diameter

At turned off part,

1 3/4"

Over threads

No. of threads per inch

10

Area supported by each stay

85.5 sq. in.



Working pressure by Rules 213 Lbs. Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 1 7/8" - 2" or Over threads 213 Lbs.

No. of threads per inch 10 Area supported by each stay 99.5 sq. Working pressure by Rules 213 Lbs.

Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 8 Wg. 5 1/2" No. of threads per inch 9

Pitch of tubes 4 3/4" x 4 3/4" Working pressure by Rules 215 Lbs. Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 4' 9 1/2" dia x 1 1/2" No. of rivets and diameter of rivet holes 16 @ 1 5/8"

Outer row rivet pitch at ends 10.4" Depth of flange if manhole flanged Yes Steam Dome: Material Steel

Tensile strength 36 1/2 Tons Thickness of shell 3/4" Description of longitudinal joint S.L. Lap.

Diameter of rivet holes 1 1/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54.0 Rivets 43.8

Internal diameter 33" Working pressure by Rules 215 Lbs. Thickness of crown 7/8" No. and diameter of stays 2 @ 2 1/4" Inner radius of crown Yes Working pressure by Rules 215 Lbs.

How connected to shell Riveted Size of doubling plate under dome 4' 9 1/2" x 1 1/2" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 5/8" @ 10.4"

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 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 \_\_\_\_\_, 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 \_\_\_\_\_

The foregoing is a correct description,  
FOR CHARLES D. HOLMES & CO., LTD,  
J. D. Cooper Manufacturer.

Dates of Survey { During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith Yes. while building { During erection on board vessel - - - (If not state date of approval.)

See machinery Rpt. Total No. of visits 1

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Lady Lilian 43635

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey &c in accordance with the approved plan, and the materials & workmanship are found to be good. It has been satisfactorily fitted on board, tried under steam & its safety valves adjusted as above.

Charged on engine report

Survey Fee <u>£ 10.00</u>	When applied for, <u>19</u>
Travelling Expenses (if any) <u>£ 10.00</u>	When received, <u>19</u>

John D. Mackenzie  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_

Assigned See Mchz J. E.