

## REPORT ON BOILERS.

No. 46555

14 FEB 1936

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of

HULL

No. in Survey held at

Reg. Book

Date, First Survey

15<sup>th</sup> Nov. 1935

Last Survey

4<sup>th</sup> Feb. 1936

1936

18228 on the Steam Trawler "Lady Philomena"

(Number of Visits

✓)

Tons

Gross

417

Net

157

Master

Built at Beverley

By whom built Cook, Welton &amp; Gemmell

Yard No. 606

When built 1936

Engines made at

Hull

By whom made C.D. Holmes &amp; Co. Ltd.

Engine No. 1490 When made 1936

Boilers made at

do

By whom made

do

Boiler No. do When made 1936

Nominal Horse Power

105

Owners Jutland Amalgamated Trawlers Ltd.

Port belonging to Hull.

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland Ltd.

(Letter for Record "S" ✓)

Total Heating Surface of Boilers

1940 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 19/12/35

No. of Certificate 3925

Can each boiler be worked separately ✓

Area of Firegrate in each Boiler

53.7 sq. ft.

No. and Description of safety valves to each boiler Double, 2 3/4" dia. Spring-loaded.

Area of each set of valves per boiler

per Rule 11.3 sq. ins.

as fitted 11.9 sq. ins.

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 1/2"

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 No

Largest internal dia. of boilers

14'-6"

Length 10'-8"

Shell plates: Material Steel

Tensile strength 29/33 Tons.

Thickness

1 9/32"

Are the shell plates welded or flanged No

Description of riveting: circ. seams {end DR. ✓

long. seams T.R. D.B.S. ✓

Diameter of rivet holes in

circ. seams 1 1/32"

Pitch of rivets {3 3/4" ✓

Percentage of strength of circ. end seams

plate 64.3

rivets 46.8

Percentage of strength of circ. intermediate seam

plate 85.5

rivets 88.8

Percentage of strength of longitudinal joint

plate 85.5

rivets 88.8

Working pressure of shell by Rules 202 lbs.

Thickness of butt straps

outer 1"

inner 1 1/8"

No. and Description of Furnaces in each Boiler 3 Plain.

Material Steel

Tensile strength 26/30 Tons.

Smallest outside diameter 3'-6 1/2"

Length of plain part

top 6'-3"

bottom 5'-6"

Thickness of plates

crown 1 3/16"

Description of longitudinal joint Welded.

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

Working pressure of furnace by Rules 206 lbs.

End plates in steam space: Material Steel.

Tensile strength 26/30 Tons.

Thickness 1 5/8"

Pitch of stays 19 3/4" x 18 3/4"

How are stays secured Double nuts and washers.

Working pressure by Rules 203 lbs.

Tube plates: Material {front } steel.

Tensile strength {26/30 Tons.

Thickness {15/16" ✓

7/8"

Mean pitch of stay tubes in nests 10.7'

Pitch across wide water spaces 14" ✓

Working pressure {front 209 lbs.

back 242 lbs.

Girders to combustion chamber tops: Material Steel

Tensile strength 29/33 Tons.

Depth and thickness of girder

at centre 10" x (7/8" x 2)

Length as per Rule 36 1/4"

Distance apart 9" wings, 9 1/2" Centre

No. and pitch of stays

in each 3 @ 8"

Working pressure by Rules 233 lbs.

Combustion chamber plates: Material Steel.

Tensile strength 26/30 Tons.

Thickness: Sides 23/32"

Back 1/16"

Top 1/16"

Bottom 23/32"

Pitch of stays to ditto: Sides 10" x 8 1/2"

Back 9" x 9"

Top 9 1/2" x 8"

Are stays fitted with nuts or riveted over Nuts.

Working pressure by Rules 204 lbs.

Front plate at bottom: Material Steel

Tensile strength 26/30 Tons.

Thickness 15/16"

Lower back plate: Material Steel.

Tensile strength 26/30 Tons.

Thickness 7/8"

Pitch of stays at wide water space 14 1/4"

Are stays fitted with nuts or riveted over Nuts.

Working Pressure 227 lbs.

Main stays: Material Steel

Tensile strength 28/32 Tons.

Diameter {At body of stay,

3 1/4"

No. of threads per inch 8

Area supported by each stay 361 sq. ins.

Working pressure by Rules 203 lbs.

Screw stays: Material Steel

Tensile strength 26/30 Tons.

Diameter {At turned off part,

2", 1 7/8" &amp; 1 3/4"

No. of threads per inch 10

Area supported by each stay 85 &amp; 81 sq. ins.

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Working pressure by Rules  $225 \frac{lb}{sq\ in}$  Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part, Over threads  $2 \frac{1}{8} \frac{1}{8}$  }  
No. of threads per inch *10* Area supported by each stay  $104.6 \frac{sq\ in}{sq\ in}$  Working pressure by Rules  $203 \frac{lb}{sq\ in}$   
Tubes: Material *Iron* External diameter { Plain  $3 \frac{1}{2}$  Stay  $3 \frac{1}{2}$  } Thickness {  $8 \frac{mg.}{16}$  } No. of threads per inch *9*  
Pitch of tubes  $4 \frac{3}{4} \times 4 \frac{3}{4}$  Working pressure by Rules  $215 \frac{lb}{sq\ in}$  Manhole compensation: Size of opening in shell plate  $16 \times 12$  Section of compensating ring  $57 \frac{1}{2} \text{ dia} \times 1 \frac{9}{32}$  No. of rivets and diameter of rivet holes  $122 @ 1 \frac{1}{32}$   
Outer row rivet pitch at ends  $10.45$  Depth of flange if manhole flanged ☒ Steam Dome: Material *Steel*  
Tensile strength  $26/30 \text{ Ton}$  Thickness of shell  $\frac{3}{4}$  Description of longitudinal joint *SR Lap*  
Diameter of rivet holes  $1 \frac{1}{32}$  Pitch of rivets  $2 \frac{1}{4}$  Percentage of strength of joint { Plate  $54.4$  Rivets  $44$  }  
Internal diameter  $2'-9"$  Working pressure by Rules  $231 \frac{lb}{sq\ in}$  Thickness of crown  $\frac{7}{8}$  No. and diameter of stays  $2 @ 2 \frac{1}{4}$  Inner radius of crown *-* Working pressure by Rules *-*  
How connected to shell *DR Lap Joint* Size of doubling plate under dome  $57 \frac{1}{2} \text{ dia} \times 1 \frac{9}{32}$  Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell  $1 \frac{1}{32} \text{ dia} \times 10.45 \text{ Pitch}$

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 of  
FOR CHARLES T. HOLMES & CO., LTD.

*J. Cooper* Manufacturer

Dates of Survey { During progress of work in shops - - } *See Mch* Are the approved plans of boiler and superheater forwarded herewith *Yes*  
while building { During erection on board vessel - - } *Rpt 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. *"Lady Beryl" (Hul Rpt No 46425)*

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

*This boiler has been constructed under Special Survey and in accordance with the approved plan. It has been satisfactorily fitted on board, examined under steam, and the safety valves adjusted as above.*

Survey Fee *Charged on Engine Rpt*  
Travelling Expenses (if any) £ *Herewith*

When applied for, 19  
When received, 19

*A. W. B. Edwards*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 18 FEB 1936*

Assigned

*See other L.E. Rpt*  
*Hul. 46555*



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