

REPORT ON BOILERS.

No. 50402

DEC 12 1939

Received at London Office

11 DEC 1939

RETAIN HULL

t. 5a.

of writing Report

When handed in at Local Office

Port of

o. in Survey held at

Hull.

Date, First Survey

28

Last Survey

11

1939

on the

Steam Trawler

LADY LILIAN

(Number of Visits 36)

Gross 581

Net 214

ster

Built at

Beverley

By whom built

Cook, Welton & Gemmell, Ltd.

Yard No. 650

When built 1939-11

ines made at

Hull

By whom made

C. D. Holmes & Co., Ltd.

Engine No. 1552

When made 1939-11

ilers made at

-do-

By whom made

-do-

Boiler No. -do-

When made -do-

iminal Horse Power

170

Owners Lutland 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

2551 sq ft

Is forced draught fitted

yes

Coal or Oil fired

Coal

No. and Description of Boilers

One S.B.

Working Pressure

225 lbs.

Tested by hydraulic pressure to

390 lbs.

Date of test

11.9.39

No. of Certificate

4014

Can each boiler be worked separately

Area of Firegrate in each Boiler

64 sq ft

No. and Description of safety valves to each boiler

One twin valve spring loaded

Area of each set of valves per boiler

per Rule 16.1

as fitted 19.29

Pressure to which they are adjusted

225 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

12"

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

No.

Largest internal dia. of boilers

15'-9 1/16"

Length

11' 0"

Shell plates: Material

Steel

Tensile strength

31-35 tons

Thickness

1 1/16"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

Double riveted L.A.P.

long. seams

Double riveted S.B.S.

Diameter of rivet holes in

circ. seams 1 1/16"

long. seams 1 1/8"

Pitch of rivets

3 7/8"

Percentage of strength of circ. end seams

plate 62.1

rivets 44.2

Percentage of strength of circ. intermediate seam

plate

rivets

Thickness of butt straps

outer 1 1/32"

inner 1 9/32"

No. and Description of Furnaces in each Boiler

3. C.F. Dighton type

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-10"

Length of plain part

top

bottom

Thickness of plates

crown 23/32"

bottom

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

229.5 lbs.

End plates in steam space

Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/4"

Pitch of stays 19 1/4" x 18 5/8"

How are stays secured

Nuts and washers

Working pressure by Rules

236 lbs.

Tube plates

Material

front Steel

back Steel

Tensile strength

26-30 tons

Thickness

2 9/32"

Working pressure

front 236 lbs.

back 249 lbs.

Mean pitch of stay tubes in nests

10-9 1/4"

Pitch across wide water spaces

1 1/4"

Working pressure

front 236 lbs.

back 249 lbs.

Girders to combustion chamber tops

Material

Steel

Tensile strength

29-30 tons

Depth and thickness of girder

at centre

9" x 7 1/8" x 2"

Length as per Rule

32 1/4"

Distance apart

9 1/4"

No. and pitch of stays

in each

3 @ 7 1/2"

Working pressure by Rules

236 lbs.

Combustion chamber plates

Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

23/32"

Back

23/32"

Top

1/16"

Bottom

15/16"

Pitch of stays to ditto

Sides

9 1/4" x 8"

Back

8 3/8" x 9 1/16"

Top

9 1/4" x 7 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

235 lbs.

Front plate at bottom

Material

Steel

Tensile strength

26-30 tons

Thickness

2 9/32"

Thickness

2 1/32"

Lower back plate

Material

Steel

Tensile strength

26-30 tons

Thickness

2 9/32"

Pitch of stays at wide water space

1 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

225 lbs.

Main stays

Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay

3 3/8"

or

Over threads

3 3/8"

No. of threads per inch

8

Area supported by each stay

368 sq ft

Working pressure by Rules

237 lbs.

Screw stays

Material

Steel

Tensile strength

26-30 tons

Diameter

At turned off part

or

Over threads

1 3/4", 1 7/8", 2", 2 1/8"

No. of threads per inch

10

Area supported by each stay

77 sq ft



Lloyd's Register Foundation

Working pressure by Rules 295.7 lbs. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, or Over threads. 1 7/8" 2" 2 1/8"

No. of threads per inch 10 Area supported by each stay 158 Working pressure by Rules 229 lbs / sq"

Tubes: Material W. I. External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 3/16" - 3/8" - 7/16" No. of threads per inch 9

Pitch of tubes 4 3/4" x 4 3/4" Working pressure by Rules 260 PLAIN. 220 STAY. Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends Depth of flange if manhole flanged 3 1/4" Steam Dome: Material Steel.

Tensile strength 26 - 30 tons. Thickness of shell 1/4" Description of longitudinal joint S. R. Lap.

Diameter of rivet holes 2 1/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54% Rivets 40.8%

Internal diameter 2' - 9" Working pressure by Rules 230 lbs. Thickness of crown 15/16" No. and diameter of stays 2 @ 2 1/8" Inner radius of crown flat. Working pressure by Rules 225 lbs / sq"

How connected to shell Double riveted. Size of doubling plate under dome 4 - 11 1/4" x 1 15/32" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/2 dia. - 10 1/4" pitch

Type of Superheater Smoke tube type Manufacturers of { Tubes Steel forgings Steel castings

Number of elements 60 Material of tubes Steel Internal diameter and thickness of tubes 1 7/8" dia. 3/16" thick

Material of headers Steel Tensile strength Thickness 5/16" Can the superheater be shut off and the boiler be worked separately yes. Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes.

Area of each safety valve 1.77 sq" Are the safety valves fitted with easing gear yes. Working pressure as per Rules 225 lbs / sq" Hydraulic test pressure: tubes 1000 lbs. forgings and castings 675 lbs. and after assembly in place 675 lbs. Are drain cocks or valves fitted to free the superheater from water where necessary yes.

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes.

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

Dates of Survey { During progress of work in shops - - } 1939 MAY 23, JUN 20, JUL 20, 31, AUG 1, 2, 14, 15, 21, 24, 25, 31, SEP 15, 11, Are the approved plans of boiler and superheater forwarded herewith yes. (If not state date of approval.)

{ During erection on board vessel - - - } 13, 16, 20, 26, 27, OCT 3, 5, 14, 18, 20, 21, 23, 25, 27, 31, NOV 3, 6, 11. Total No. of visits 36.

Is this Boiler a duplicate of a previous case yes. If so, state Vessel's name and Report No. Cape Passaro Rpt No 50266.

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

This boiler has been built under Special Survey in accordance with the Rules & the approved plans. The workmanship & materials are good & when subjected to the hydraulic test presented to the Rules it was found satisfactory in every respect.

Survey Fee ... £ 20 - 00 When applied for, 19

Travelling Expenses (if any) £ 20 - 00 When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED 20 DEC 1939

Assigned See Hul 76 50402

