

# REPORT ON BOILERS.

No. 50402

DEC 12 1939

Received at London Office

11 DEC 1939

Port of

HULL

t. 5a.

of writing Report

10

When handed in at Local Office

o. in Survey held at

Book.

on the

Steam Trawler

ster

gines made at

ilers made at

iminal Horse Power

Built at

Beverley

By whom built

Cook, Welton & Gennell, Ltd.

Yard No. 650.

When built 1939-11.

By whom made

C.D. Holmes & Co., Ltd.

Engine No. 1552.

When made 1939-11.

By whom made

-do-

Boiler No. -do-

When made -do-

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.

Working Pressure

225 lbs.

No. and Description of Boilers

One S.B.

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 sq ft

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 1/2"

Length

11' 0"

Shell plates: Material

Steel

Tensile strength

31-35 tons.

Thickness

1 1/2"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

inter.

Double riveted lap.

long. seams

Triple riveted S.B.S.

Diameter of rivet holes in

circ. seams

1 1/2"

Pitch of rivets

9 1/16"

Percentage of strength of circ. end seams

plate

62.1

rivets

44.2

Percentage of strength of circ. intermediate seam

plate

86.9

rivets

86.9

Percentage of strength of longitudinal joint

plate

86.9

rivets

86.9

Working pressure of shell by Rules

226.3 lbs.

Thickness of butt straps

outer

1 1/2"

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

23/32"

bottom

23/32"

Thickness of plates

crown

23/32"

bottom

23/32"

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

23/32"

23/32"

Working pressure

front

236 lbs.

back

249 lbs.

Mean pitch of stay tubes in nests

10-94"

Pitch across wide water spaces

14 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 1/2" x 2"

Length as per Rule

32 1/4"

Distance apart

9 1/4"

No. and pitch of stays

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

23/32"

Lower back plate: Material

Steel

Tensile strength

26-30 tons.

Thickness

23/32"

Pitch of stays at wide water space

14 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"

No. of threads per inch

8

Area supported by each stay

368 sq in

Over threads

237 lbs.

Screw stays: Material

Steel

Tensile strength

26-30 tons.

Diameter

At turned off part,

1 1/4", 1 1/8", 2", 2 1/8"

No. of threads per inch

10

Area supported by each stay

77 sq in



Working pressure by Rules 235.7 lbs. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 7/8" or 2" Over threads 1 7/8" 2" 2 1/8" 9

No. of threads per inch 10 Area supported by each stay 138 Working pressure by Rules 229 lbs.

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 3/4" 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 3/8" Inner radius of crown flat. Working pressure by Rules 225 lbs.

How connected to shell Double riveted. Size of doubling plate under dome 4 - 11 1/4" x 15 3/32" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/2" dia. - 10 3/4" pitch.

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

Number of elements 60 Material of tubes Steel Internal diameter and thickness of tubes 17mm bore 3mm 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. in. Are the safety valves fitted with easing gear yes. Working pressure as per Rules 225 lbs.

tubes 1000 lbs. forgings and castings 675 lbs. and after assembly in place 675 lbs. Hydraulic test pressure: valves fitted to free the superheater from water where necessary yes. Are drain cocks or

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

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

Dates of Survey { During progress of work in shops - - 1939 MAY 23, JUN 20, JUL 20, AUG 1, 1, 3, 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.)

while building { 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) £ 0-00 When received, 19

Committee's Minute WED 20 DEC 1939

Assigned See Hul 76 50402

Engineer Surveyor to Lloyd's Register of Shipping. L. J. Holmes