

## REPORT ON BOILERS.

No. 397/95.

Received at London Office 23 APR 1929

Date of writing Report 19.4.1929 When handed in at Local Office 19.4.1929 Port of

HULL.

No. in Surrey held at Reg. Book.

Hull.

Date, First Survey

25 Oct 1928

Last Survey

12 April 1929.

61616 on the Steam Trawler "LARWOOD"

(Number of Visits 22.)

Gross 31898

Tons Net 14586.

Master

Built at

Selby.

By whom built

Cochrane &amp; Sons Ltd

Yard No. 1042

When built 1929

Engines made at

Hull

By whom made

Amos &amp; Smith Ltd

Engine No. 545

When made 1929

Boilers made at

Hull

By whom made

do

Boiler No. 545

When made 1929

Nominal Horse Power

91

Owners

The Campion S. Fishing Co Ltd

Port belonging to

Grimsby.

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

Manufacturers of Steel

Appledy Iron &amp; Steel Co Ltd.

(Letter for Record

5)

Total Heating Surface of Boilers

1546 Sq. feet.

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended return tube

Working Pressure 200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test

14.3.29

No. of Certificate

3699.

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

45 sq ft

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

per Rule 9.0 sq ft

as fitted 9.8 sq ft

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

4"

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

✓

Largest internal dia. of boilers

14'-0"

Length

10'-9"

Shell plates: Material

Steel

Tensile strength

78/32 Tons.

Thickness

1 1/4"

Are the shell plates welded or flanged

✓

Description of riveting: circ. seams

end D.R.

long. seams

T.R. B.B.S.

Diameter of rivet holes in

circ. seams 1 9/32"

long. seams 1 3/32"

Pitch of rivets

3 7/8"

Percentage of strength of circ. end seams

plate 66.9

rivets 42.2

Percentage of strength of circ. intermediate seam

plate 84.9

rivets 90.3

Percentage of strength of longitudinal joint

plate 84.9

rivets 90.3

Working pressure of shell by Rules

201 lbs.

Thickness of butt straps

outer 1"

inner 1 1/6"

No. and Description of Furnaces in each Boiler

Three, plain.

Material

Steel

Tensile strength

78/30 Tons.

Smallest outside diameter

41 5/8"

Length of plain part

top 80"

bottom 84"

Thickness of plates

crown 1 3/16"

bottom 1 1/16"

Description of longitudinal joint

Welded.

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

3 1/2" x 3 1/2" x 1 3/8"

Working pressure of furnace by Rules

208 lbs.

End plates in steam space: Material

Steel

Tensile strength

78/30 Tons.

Thickness

1 3/16"

Pitch of stays

21" x 16"

How are stays secured

Double nuts &amp; washers.

Working pressure by Rules

200 lbs.

Tube plates: Material

front Steel

back "

Tensile strength

78/30 Tons.

Thickness

1 5/16"

7/8"

Mean pitch of stay tubes in nests

10.1"

Pitch across wide water spaces

14"

Working pressure

front 208 lbs.

back 220 "

Girders to combustion chamber tops: Material

Steel

Tensile strength

78/32 Tons.

Depth and thickness of girder

at centre

9 1/4" x 1 3/4"

Length as per Rule

36"

Distance apart

9"

No. and pitch of stays

in each

3 @ 8"

Working pressure by Rules

204 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

78/30 Tons.

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

10" x 8"

Back

9 7/8" x 8 1/2"

Top

9" x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

205 lbs.

Front plate at bottom: Material

Steel

Tensile strength

78/30 Tons.

Thickness

1 5/16"

Lower back plate: Material

Steel

Tensile strength

78/30 Tons.

Thickness

7/8"

Pitch of stays at wide water space

14" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

250 lbs.

Main stays: Material

Steel

Tensile strength

78/32 Tons.

Diameter

At body of stay,

3 1/4"

Over threads

No. of threads per inch

6

Area supported by each stay

336 sq in

Working pressure by Rules

240 lbs.

Screw stays: Material

Steel

Tensile strength

78/30 Tons.

Diameter

At turned off part,

1 7/8"

or 1 3/4"

No. of threads per inch

9

Area supported by each stay

81.75 sq in

002038-002050-0259

Working pressure by Rules 222 Lbs. Are the stays drilled at the outer ends No Margin stays: Diameter <sup>At turned off part,</sup> 2" and 1 7/8"  
 No. of threads per inch 9 Area supported by each stay 101.25 Working pressure by Rules 200 Lbs.  
 Tubes: Material Iron External diameter <sup>Plain</sup> 3 1/2" Thickness <sup>Stay</sup> 3/8" - 5/16" No. of threads per inch 9  
 Pitch of tubes 5 1/8" x 5" Working pressure by Rules 215 Lbs. Manhole compensation: Size of opening in  
 shell plate 16" x 12" Section of compensating ring 56 7/8" dia. No. of rivets and diameter of rivet holes  
 Outer row rivet pitch at ends Depth of flange if manhole flanged Steam Dome: Material Steel  
 Tensile strength 26,300 Tons. Thickness of shell 3/4" Description of longitudinal joint S.R. Lap  
 Diameter of rivet holes 1" Pitch of rivets 2 1/4" Percentage of strength of joint <sup>Plate</sup> 54  
 Internal diameter 36" Working pressure by Rules Thickness of crown 15/16" Rivets 43.6  
 stays Two @ 2 1/2" Inner radius of crown ✓ Working pressure by Rules  
 How connected to shell Riveted Size of doubling plate under dome 56 7/8" dia Diameter of rivet holes and pitch  
 of rivets in outer row in dome connection to shell 1 1/4" @ 10 1/4"

Type of Superheater Manufacturers of <sup>Tubes</sup> 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 23 inclusive for boilers been complied with

For AMOS & SMITH LTD.

The foregoing is a correct description,

Manufacturer.

Dates of Survey <sup>During progress of</sup> work in shops --  
<sup>while</sup> building <sup>During erection on</sup> board vessel --

See attached report  
on Machy.

Are the approved plans of boiler and superheater forwarded herewith  
(If not state date of approval.)  
Total No. of visits ✓

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under  
Special Survey & in accordance with the approved plan & the  
materials & workmanship are sound & good. It has been  
Satisfactorily fitted on board, tried under working conditions,  
& its Safety valves adjusted as above.

Survey Fee £100 When applied for, 192  
 Travelling Expenses (if any) £ When received, 192

John Mackinlay  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 26 APR 1929

Assigned See B. 6. 1st. attached



© 2020

Lloyd's Register  
Foundation