

REPORT ON BOILERS.

No. 40690.

25 FEB 1930

Received at London Office

Date of writing Report

1930

When handed in at Local Office

11 Feb 1930

Port of

HULL

No. in Survey held at

Hull.

Date, First Survey

14 Oct 1929

Last Survey

11 Feb 1930

Reg. Book.

11675

on the

Steam Trawler - LOCH INVER

(Number of Visits

19.

Gross

356.46.

Tons

Net

151.44.

Master

Built at

Beverley

By whom built

Cook, Walton & Hemmell

Yard No.

534

When built

1930

Engines made at

Hull

By whom made

Charles S. Holmes & Co Ltd

Engine No.

1385

When made

1930

Boilers made at

Hull

By whom made

do

Boiler No.

1385

When made

1930

Nominal Horse Power

96

Owners

Port belonging to

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Wilkinson & Sargent & Eisenhütten

(Letter for Record

S

Total Heating Surface of Boilers

1698 sq. ft.

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended return

Working Pressure

200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test

2.1.30

No. of Certificate

3455

Can each boiler be worked separately

Area of Firegrate in each Boiler

49.2 sq. ft.

No. and Description of safety valves to each boiler

2 Spring loaded

Area of each set of valves per boiler

per Rule

9.8 sq. ft.

as fitted

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

7"

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

14'-0"

Length

10'-8"

Shell plates: Material

Steel

Tensile strength

28/32 Tons.

Thickness

1 1/2"

Are the shell plates welded or flanged

Yes

Description of riveting: circ. seams

end

5 R.

long, seams

T.R. 5 R.

Diameter of rivet holes in

circ. seams

1 1/2"

Pitch of rivets

5 3/4"

Percentage of strength of circ. end seams

plate

65.8

Percentage of strength of circ. intermediate seam

plate

88.03

Percentage of strength of longitudinal joint

plate

90.8

Working pressure of shell by Rules

20 lbs.

Thickness of butt straps

inner

1 1/2"

No. and Description of Furnaces in each Boiler

Three furnaces

Material

Steel

Tensile strength

28/32 Tons

Smallest outside diameter

41"

Length of plain part

top

76"

Thickness of plates

crown

13/16"

Description of longitudinal joint

butted

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

Working pressure of furnace by Rules

219 lbs.

End plates in steam space: Material

Steel

Tensile strength

28/32 Tons

Thickness

1 1/2"

Pitch of stays

18"

How are stays secured

Nuts & washers

Working pressure by Rules

220 lbs.

Tube plates: Material

front

Steel

Tensile strength

28/32 Tons

Thickness

1 1/2"

Mean pitch of stay tubes in nests

10.94"

Pitch across wide water spaces

13 3/4"

Working pressure

front

211 lbs.

back

230 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 Tons

Depth and thickness of girder

at centre

10 1/2" x 1 1/4"

Length as per Rule

36 3/4"

Distance apart

9"

No. and pitch of stays

in each

3 @ 8 3/4"

Working pressure by Rules

210 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

28/32 Tons

Thickness: Sides

3/4"

Back

23/32"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

9 x 8 3/4"

Back

9 x 8 1/2"

Top

9 x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

230 lbs.

Front plate at bottom: Material

Steel

Tensile strength

28/32 Tons

Thickness

1 1/2"

Lower back plate: Material

Steel

Tensile strength

28/32 Tons

Thickness

29/32"

Pitch of stays at wide water space

4 1/2 x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

228 lbs.

Main stays: Material

Steel

Tensile strength

28/32 Tons

Diameter

At body of stay,

3/4"

No. of threads per inch

8

Area supported by each stay

324 sq. in.

Working pressure by Rules

248 lbs.

Screw stays: Material

Steel

Tensile strength

28/32 Tons

Diameter

At turned off part,

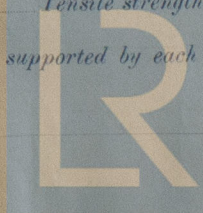
1 7/8"

No. of threads per inch

10

Area supported by each stay

78.9 sq. in.

Lloyd's Register
Foundation

Working pressure by Rules *230 lbs* Are the stays drilled at the outer ends *Yes* Margin stays: Diameter { At turned off part, or Over threads *1 7/8"*
No. of threads per inch *10* Area supported by each stay *97.75 sq. in.* Working pressure by Rules *210 lbs*
Tubes: Material *Am* External diameter { Plain *3 1/2"* Thickness { *5/16"* No. of threads per inch *19*
Pitch of tubes *4 7/8"* Working pressure by Rules *215 lbs* Manhole compensation: Size of opening
shell plate *16 x 12* Section of compensating ring *24 x 27 x 1 3/4* No. of rivets and diameter of rivet holes *32 @ 1 1/2"*
Outer row rivet pitch at ends *8 3/4"* Depth of flange if manhole flanged
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets
Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays
How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

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
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,
Harold & Sheardson Manufacturers
DIRECTOR.

Dates of Survey { During progress of work in shops - - - See attached report on Machy. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - - Total No. of visits *1*

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

The plate dimensions will be sent with first entry report on steam trials - Home to be reported shortly.

Charged on Engine Report
Survey Fee *£100* When applied for, *192*
Travelling Expenses (if any) *£100* When received, *192*

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

Committee's Minute *FRI. 28 FEB. 1930*
Assigned *See other J.E. Rpt*