

REPORT ON BOILERS.

No. 16469

Received at London Office 23 FEB 1931

Date of writing Report 21-2-1931 When handed in at Local Office 21-2-1931 Port of Aberdeen

No. in Survey held at Aberdeen Date, First Survey 25-3-30 Last Survey 14-2-1931  
on the steam trawler "RIGHTWAY." (Number of Visits 19.) Gross 263.38 Tons Net 114.80.

Master Built at Aberdeen By whom built J. Lewis & Sons Ltd. Yard No. 117 When built 1931  
Engines made at Aberdeen By whom made J. Lewis & Sons Ltd. Engine No. 200 When made 1931  
Boilers made at Aberdeen By whom made J. Lewis & Sons Ltd. Boiler No. 161 When made 1931  
Nominal Horse Power 90 Owners The Crater Steam Fishing Co. Ltd. Port belonging to North Shields.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel David Colville & Sons Ltd. & James Dunlop & Co. Ltd. (Letter for Record S)  
Total Heating Surface of Boilers 1779 sq. ft. Is forced draught fitted no Coal or Oil fired Coal.  
No. and Description of Boilers One S.E. Main Working Pressure 180 lbs.

Tested by hydraulic pressure to 320 lbs. Date of test 15-1-31 No. of Certificate 1103. Can each boiler be worked separately  
Area of Firegrate in each Boiler 52.25 sq. ft. No. and Description of safety valves to each boiler Two spring loaded.  
Area of each set of valves per boiler per Rule 11.4 sq. in. Pressure to which they are adjusted 180 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" Is oil fuel carried in the double bottom under boilers no  
Smallest distance between shell of boiler and tank top plating no tank Is the bottom of the boiler insulated no  
Largest internal dia. of boilers 13'-3" Length 10'-6" Shell plates: Material Steel Tensile strength 29/33 tons.  
Thickness 1 1/16" Are the shell plates welded or flanged no Description of riveting: circ. seams end D.R. inter. 3.469"  
Long. seams T.R.D.B.S. Diameter of rivet holes in circ. seams 1 1/8" Pitch of rivets 8"  
Percentage of strength of circ. end seams plate 67.6 rivets 42.7 Percentage of strength of circ. intermediate seam plate 86 rivets 87.1  
Percentage of strength of longitudinal joint plate 86 rivets 87.1 Working pressure of shell by Rules 182.8 lbs.  
combined 89.28

Thickness of butt straps outer 13/16" inner 15/16" No. and Description of Furnaces in each Boiler 3 plain.  
Material Steel Tensile strength 26/30 tons. Smallest outside diameter 39 1/2"  
Length of plain part top 80 11/16" bottom 85 9/16" Thickness of plates crown 3/4" Description of longitudinal joint welded.  
Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 180 lbs.

End plates in steam space: Material Steel Tensile strength 26/30 tons. Thickness 1 1/32" Pitch of stays 17 1/8" x 15 3/4"  
How are stays secured Double nuts Working pressure by Rules 181 lbs.  
Tube plates: Material front Steel back Steel Tensile strength 26/30 tons Thickness 2 3/8" 3/4"

Lean pitch of stay tubes in nests 10.39" Pitch across wide water spaces 14 1/4" x 9" Working pressure front 184.7 lbs. back 193.5 lbs.  
Girders to combustion chamber tops: Material Steel Tensile strength 29/33 tons Depth and thickness of girder  
At centre 8 1/2" x 1 1/8" Length as per Rule 30.59" Distance apart 8" No. and pitch of stays  
At each 2 @ 8" Working pressure by Rules 181 lbs. Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 21/32" Back 21/32" Top 21/32" Bottom 1 1/32"  
Pitch of stays to ditto: Sides 8" x 10 1/8" Back 7 3/4" x 10 1/4" Top 8" x 8" Are stays fitted with nuts or riveted over nuts.  
Working pressure by Rules 180 lbs. Front plate at bottom: Material Steel Tensile strength 26/30 tons.

Thickness 2 3/8" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 3/4"  
Pitch of stays at wide water space 13 3/4" x 7 3/4" Are stays fitted with nuts or riveted over nuts.  
Working Pressure 182.7 lbs. Main stays: Material Steel Tensile strength 28/32 tons.

Diameter At body of stay, 2 5/8" No. of threads per inch 6 Area supported by each stay 269.7 sq. in.  
Working pressure by Rules 184 lbs. Screw stays: Material Steel Tensile strength 26/30 tons  
Diameter At turned off part, 1 1/2" & 1 5/8" No. of threads per inch 9 Area supported by each stay 64 sq. in. & 81 sq. in.

\*Boiler transferred to "Deemount" - See attached reports



Working pressure by Rules 187.4 lb. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 5/8" or Over threads. 1 7/8"

No. of threads per inch 9 Area supported by each stay 83.25 sq" Working pressure by Rules 182.6 lb.

Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 9 W.G. 1/4" + 5/16" No. of threads per inch 9

Pitch of tubes 4 1/2" Working pressure by Rules 180 lb. Manhole compensation: Size of opening 19" x 15"

shell plate 19" x 15" Section of compensating ring 33" x 1 1/4" x 1 1/8" No. of rivets and diameter of rivet holes 40 @ 1 1/8"

Outer row rivet pitch at ends 8" Depth of flange if manhole flanged 3" Steam Dome: Material

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

Inner radius of crown Working pressure by Rules

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, 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 yes.

The foregoing is a correct description,  
FOR JOHN LEWIS & SONS, LTD.,

Manufacturer

Dates of Survey { During progress of work in shops - - March 25, April 5-17, 25, May 2-8, 27, June 25, 1930 At the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes

while building { During erection on board vessel - - - Jan 27, Feb 10, 1931 Total No. of visits 19

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. "THEWAY" abn Rpt No. 16418

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

This boiler has been constructed under special survey in accordance with the approved plan & the Rules of this Society. The materials and workmanship are good. The boiler has been satisfactorily fitted on board the vessel; the safety valves adjusted under steam and tried for accumulation, and the boiler examined under working conditions and found satisfactory.

Survey Fee ... .. £ See Report on When applied for, 19

Travelling Expenses (if any) £ Machinery. When received, 19

P. Fitzgerald.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 3 MAR 1931

Assigned

See other J.E. Rpt 16469



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Lloyd's Register  
Foundation

Rpt. 13.

RE

Date of writing

No. in Sur Reg. Book.

Built at

Owners

Electric Light

Is the Vessel

System of D

Pressure of su

Direct or Alt

If alternating c

Has the Autom

Generators, a

are they over co

Where more tha

series with each

Are all terminal

short circuited, c

Position of G

is the ventilator

if situated nea

are their axes o

Earthing, are

their respective

Main Switch

a fuse on each in

Switchboards,

are they protecte

woodwork or oth

are they constru

permanently hig

with mica or mi

and is the frame

ye

bars

Main Switch

fuses

Instruments

Earth Testing

Switches, Cir

Joint Boxes S