

Rpt. 5a.

## REPORT ON BOILERS.

No. 15684.

Received at London Office

8.7.29

Date of writing Report 21-6-1929 When handed in at Local Office 5-7-1929 Port of Aberdeen

No. in Survey held at Aberdeen Date, First Survey 18-3-29 Last Survey 3-7-1929

Reg. Book. on the steam trawler "FORT DEE"

(Number of Visits 15) Gross 212 Tons Net 92

Master Built at Aberdeen By whom built J. Lewis & Sons Ltd Yard No. 107 When built 1929

Engines made at Aberdeen By whom made J. Lewis & Sons Ltd Engine No. 188 When made 1929

Boilers made at Aberdeen By whom made J. Lewis & Sons Ltd Boiler No. 127 When made 1929

Nominal Horse Power 82 Owners J. Lewis & Sons Ltd Port belonging to Aberdeen

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

Manufacturers of Steel The Steel Company of Scotland. (Letter for Record S)

Total Heating Surface of Boilers 1476 sq. ft. Is forced draught fitted no Coal or Oil fired Coal

No. and Description of Boilers One S.E. Main Working Pressure 200 lb.

Tested by hydraulic pressure to 350 lb. Date of test 12-6-29 No. of Certificate 1071 Can each boiler be worked separately

Area of Firegrate in each Boiler 38.5 sq. ft. No. and Description of safety valves to each boiler 2 spring loaded

Area of each set of valves per boiler {per Rule 8.58 sq. ft. as fitted 9.82 sq. ft. Pressure to which they are adjusted 200 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 9 1/2" 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 12'-3" Length 10'-5" Shell plates: Material Steel Tensile strength 28/32 tons

Thickness 1 1/8" Are the shell plates welded or flanged no Description of riveting: circ. seams {end D.R. inter. 3'-207" Pitch of rivets {8" 8"

long. seams T.R.D.B.S. Diameter of rivet holes in {circ. seams 1 1/8" long. seams 1 1/8"

Percentage of strength of circ. end seams {plate 64.9 rivets 48.75 Percentage of strength of circ. intermediate seam {plate 86 rivets 85.2

Percentage of strength of longitudinal joint {plate 86 rivets 85.2 combined 88.9 Working pressure of shell by Rules 200.4

Thickness of butt straps {outer 27/32" inner 31/32" No. and Description of Furnaces in each Boiler 2 plain

Material Steel Tensile strength 26/30 tons Smallest outside diameter 43 5/8"

Length of plain part {top 78.25 bottom 71.25 Thickness of plates {crown 13/16 bottom 13/16 Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 197 lb.

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1" Pitch of stays 16 1/4" x 14"

How are stays secured Double nuts. Working pressure by Rules 200.3 lb.

Tube plates: Material {front Steel back " Tensile strength {26/30 tons Thickness {15/16 13/16

Mean pitch of stay tubes in nests 10.97" Pitch across wide water spaces 14 1/2" Working pressure {front 201.5 lb. back 200 lb.

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Depth and thickness of girder at centre 8 1/2" x 1 1/8" Length as per Rule 29.5" Distance apart 8" No. and pitch of stays in each 2 @ 9 1/4" Working pressure by Rules 202 lb.

Combustion chamber plates: Material Steel Tensile strength 26/30 tons Thickness: Sides 21/32 Back 11/16 Top 21/32 Bottom 21/32

Pitch of stays to ditto: Sides 8 x 9 1/4" Back 7 1/8 x 10 1/2" Top 8 x 9 1/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 200.5 lb. Front plate at bottom: Material Steel Tensile strength 26/30 Thickness 15/16

Lower back plate: Material Steel Tensile strength 26/30 Thickness 13/16

Pitch of stays at wide water space 14 x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 200 lb. Main stays: Material Steel Tensile strength 28/32 tons

Diameter {At body of stay, 2 5/8" dia. No. of threads per inch 6 Area supported by each stay 227.5 sq. in. Over threads

Working pressure by Rules 218 lb. Screw stays: Material Steel Tensile strength 26/30 tons

Diameter {At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 74.8 sq. in. Over threads

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Working pressure by Rules 203 lb. Are the stays drilled at the outer ends no. Margin stays: Diameter { At turned off part, 1 3/4" or Over threads 1 3/4"  
No. of threads per inch 9. Area supported by each stay 89.80" Working pressure by Rules 202 lb.  
Tubes: Material Iron External diameter { Plain 3 1/2" Thickness { 8 W.G. No. of threads per inch 9  
Stay 3 1/2" 1/4" x 5/16"  
Pitch of tubes 4 3/4" Working pressure by Rules 215 lb. Manhole compensation: Size of opening in  
shell plate 15" x 19" Section of compensating ring 2-5" x 2-9" 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 23 inclusive for boilers been complied with yes.  
The foregoing is a correct description,  
FOR JOHN LEWIS & SONS, LTD. Manufacture

Dates of Survey { During progress of 1929. work in shops - - Feb. 18, 21, Apr. 5, 12, 30, May 7, 13, 17, 23, 1929 the approved plans of boiler and superheater forwarded herewith yes.  
while building { During erection on board vessel - - - JUNE 26, 28, JULY 3 (If not state date of approval.)  
Total No. of visits 15

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The Boiler has been Constructed  
under Special Survey in accordance with the Rules  
The materials & workmanship are good  
The boiler has now been efficiently fitted on board the vessel.

Survey Fee ... See Report on Machinery When applied for, 192  
Travelling Expenses (if any) £ : : When received, 192

P. Fitzgibbon Sydney  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 12 JUL 1929  
Assigned see minute on  
Abn. Rpt 15684