

# REPORT ON BOILERS.

No. 30151

Received at London Office

Date of writing Report 28<sup>th</sup> Sept. 1929 When handed in at Local Office 1<sup>st</sup> October 1929 Port of Sunderland.

No. in Survey held at Sunderland Date, First Survey

Last Survey Sep. 26 1929

Book on the S.S. "DUNSLEY"

(Number of Visits) Gross 3861 96 Tons Net 2317.06

ster Built at Sunderland By whom built Robert Thompson & Sons Ltd. Yard No. 336 When built 1929.

gines made at Sunderland By whom made The North Eastern Marine Eng. Co. Ltd. Engine No. 2717 When made 1929

lers made at Sunderland By whom made The North Eastern Marine Eng. Co. Ltd. Boiler No. 2717 When made 1929

inal Horse Power 340 Owners Rowland & Farwood's S.S. Co. Ltd. Port belonging to Whitby.

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

Manufacturers of Steel Appley Iron Co. Ltd., and The Steel Company of Scotland Ltd. (Letter for Record (S) ✓)

al Heating Surface of Boilers 5276 sq ft Is forced draught fitted No Coal or Oil fired Coal ✓

and Description of Boilers Two Single Ended Marine Type 2SB. Working Pressure 180 lbs/sq in

ted by hydraulic pressure to 320 lbs/sq in Date of test 1.8.29 No. of Certificate 4047 Can each boiler be worked separately Yes ✓

ea of Firegrate in each Boiler 64 sq ft No. and Description of safety valves to each boiler Two direct Spring Loaded.

ea of each set of valves per boiler (per Rule 16.91 sq in) Pressure to which they are adjusted 185 lbs/sq in Are they fitted with easing gear Yes ✓

case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

allest distance between boilers and bunkers 2'-3" Is oil fuel carried in the double bottom under boilers No.

allest distance between shell of boiler and tank top plating 2'-0 1/2" Is the bottom of the boiler insulated Yes.

greatest internal dia. of boilers 16'-3 1/16" Length 11'-0" Full Shell plates: Material Steel Tensile strength 29-33 tons/sq in

ickness 1 9/32" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. LAP

g. seams T.R.D.B.S. Diameter of rivet holes in (circ. seams 1 11/32" long. seams 1 1/32" Pitch of rivets 4" 9/16" ✓

centage of strength of circ. end seams (plate 66.4 rivets 43.8) Percentage of strength of circ. intermediate seam (plate 85.57 rivets 88.1) Working pressure of shell by Rules 180 lbs/sq in

centage of strength of longitudinal joint (plate 88.1 rivets 88.74) No. and Description of Furnaces in each Boiler Four Corrugated Daylight Section 4C ✓

ickness of butt straps (outer 1" inner 1 1/8" Tensile strength 26-30 tons/sq in Smallest outside diameter 3'-2 1/4" ✓

aterial Steel Thickness of plates (crown 1/2" bottom 1/2" Description of longitudinal joint Weld.

ensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 188 lbs/sq in

l plates in steam space: Material Steel Tensile strength 26-30 tons/sq in Thickness 1 5/32" Pitch of stays 23 7/8" x 23 1/4"

c are stays secured Double nuts. Working pressure by Rules 182.7 lbs/sq in

be plates: Material (front Steel back Steel Tensile strength 26-30 tons/sq in Thickness 1 7/8" 25/32" ✓

on pitch of stay tubes in nests 10.9" Pitch across wide water spaces 14 1/2" x 9 1/4" Working pressure (front 193 lbs/sq in (W.W. SPACE) back 184 lbs/sq in

lers to combustion chamber tops: Material Steel Tensile strength 28-32 tons/sq in Depth and thickness of girder

entre 9 1/8" x 2 1/4" Length as per Rule 32 15/16" Distance apart 13" No. and pitch of stays

ach 3 @ 7 3/4" Working pressure by Rules 183.3 lbs/sq in Combustion chamber plates: Material Steel

ile strength 26-30 tons/sq in Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 15/16" ✓

h of stays to ditto: Sides 11 3/8" x 10 3/8" Back 11 1/4" x 10 5/16" Top 13" x 7 3/4" Are stays fitted with nuts or riveted over Fitted with nuts.

Working pressure by Rules 182.5 lbs/sq in (SIDES LEAST) Front plate at bottom: Material Steel Tensile strength 26-30 tons/sq in

ickness 1 7/8" Lower back plate: Material Steel Tensile strength 26-30 tons/sq in Thickness 1 7/8" ✓

h of stays at wide water space 14 1/2" x 10 5/16" Are stays fitted with nuts or riveted over Fitted with nuts.

Working Pressure 198 lbs/sq in Main stays: Material Steel Tensile strength 28-32 tons/sq in

meter (At body of stay, 3 3/8" or Over threads No. of threads per inch 6 Area supported by each stay 555 sq in

Working pressure by Rules 180.5 lbs/sq in Screw stays: Material Steel Tensile strength 26-30 tons/sq in

meter (At turned off part, 1 3/4" + 1 1/8" or Over threads No. of threads per inch 9 Area supported by each stay 118 sq in



Working pressure by Rules 180 lbs. sq. in. (1 1/2" LEAST) Are the stays drilled at the outer ends ho. Margin stays: Diameter { At turned off part, or Over threads 2"

No. of threads per inch 9 Area supported by each stay 133 sq. in. Working pressure by Rules 186 lbs. sq. in.

Tubes: Material Seamless Steel External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 W.G. 1/4" x 5/16" No. of threads per inch 9

Pitch of tubes 4 5/8" x 4 1/2" Working pressure by Rules PLAIN - 230 lbs. sq. in. STAY 1/4" = 196 lbs. sq. in. 5/16" = 192 " Manhole compensation: Size of opening B

END plate 16" x 12" Section of compensating ring ☒ No. of rivets and diameter of rivet holes 22

Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged 3 1/4" Steam Dome: Material Steel

Tensile strength 55,000 Thickness of shell 1 1/2" Description of longitudinal joint Butt joint

Diameter of rivet holes 1 1/8" Pitch of rivets 2 1/2" Percentage of strength of joint { Plate 85% Rivets 85%

Internal diameter 54" Working pressure by Rules 230 lbs. sq. in. Thickness of crown 1 1/2" No. and diameter of rivets 22

stays 5 Inner radius of crown 18" Working pressure by Rules 230 lbs. sq. in.

How connected to shell By stays Size of doubling plate under dome 16" x 12" Diameter of rivet holes and of rivets in outer row in dome connection to shell 1 1/8"

Type of Superheater Water tube Manufacturers of { Tubes W. G. & Co. Steel castings W. G. & Co.

Number of elements 2 Material of tubes Steel Internal diameter and thickness of tubes 4 1/2" x 1/2"

Material of headers Steel Tensile strength 55,000 Thickness 1 1/2" Can the superheater be shut off from the boiler Yes

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 10 sq. in. Are the safety valves fitted with easing gear Yes Working pressure as adjusted 180 lbs. sq. in.

Rules ASME Pressure to which the safety valves are adjusted 180 lbs. sq. in. Hydraulic test pressure 230 lbs. sq. in.

tubes 2 castings 2 and after assembly in place 180 lbs. sq. in. Are drain cocks or valves fitted Yes

to free the superheater from water where necessary Yes

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

The foregoing is a correct description, John Neill Manufacturer

Dates of Survey { During progress of work in shops - - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes.

while building { During erection on board vessel - - - } Total No. of visits 2

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The Boilers have been built in Special Survey & satisfactorily fitted in the vessel. The Materials and Workmanship are good. For notation please see Machinery Report.

Survey Fee £ 100 When applied for, 192

Travelling Expenses (if any) £ 50 When received, 192

Charged on Machinery Report

Engineer Surveyor to Lloyd's Register of Shipping Alfred Lee

Committee's Minute TUE. 8 OCT 1929

Assigned See above attached