

REPORT ON BOILERS.

No. 95474

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Date of writing Report 19 When handed in at Local Office 30/9/37 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at Newcastle on Tyne Date, First Survey 23 Dec/36 Last Survey 28/9/1937
on the Single Screw Motor-tanker "ARNDALE" (Number of Visits) Gross Tons 8296 Net Tons 4936

Master Built at Newcastle By whom built Swan, Hunter & Wigham Richardson Ls Yard No. 1516 When built 1937
Engines made at Sunderland By whom made Wm Daxford & Sons Ls Engine No. 201 When made 1937
Boilers made at Newcastle on Tyne By whom made Swan, Hunter & W. Richardson Ls Boiler No. 1516 When made 1937
Nominal Horse Power $\frac{2595}{15} = 173$ Owners The Admiralty Port belonging to LONDON

Waste Heat Fuel Fired

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland (Letter for Record S.)
Total Heating Surface of Boilers 2595 sq ft Is forced draught fitted Yes Coal or Oil fired Oil fired
No. and Description of Boilers One Single Ended Multitubular Scotch Working Pressure 150 lbs/sq in
Tested by hydraulic pressure to 275 lbs Date of test 9/7/37 No. of Certificate 724 Can each boiler be worked separately Yes
Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler 2-2 1/4 cockburns Improved
Area of each set of valves per boiler {per Rule 9.85 sq ins as fitted 11.84 " Pressure to which they are adjusted 150 lbs Are they fitted with easing gear Yes
In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main Boilers
Smallest distance between boilers or uptakes and bunkers or woodwork 16 " Is oil fuel carried in the double bottom under boilers Yes
Smallest distance between shell of boiler and tank top plating 16 " Is the bottom of the boiler insulated Yes
Largest internal dia. of boilers 13'-4 1/4 " Length 11'-6 " Shell plates: Material Steel Tensile strength 30/34 tons
Thickness 7/8 " Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. Lap inter. none
long. seams T.R. Dble butt straps Diameter of rivet holes in {circ. seams 1 " long. seams 15/16 " Pitch of rivets {plate 3.24 " rivets 6.625 "
Percentage of strength of circ. end seams {plate 69.18 rivets 42.41 Percentage of strength of circ. intermediate seam {plate 85.84 rivets 85.55 combined 88.80 Working pressure of shell by Rules 151 lbs

Thickness of butt straps {outer 2 1/32 " inner 25/32 " No. and Description of Furnaces in each Boiler Two at wings - Brighton Corrupted. at Centre back - plain tube for access
Material Steel Tensile strength 26/30 tons Smallest outside diameter 37 3/16 "
Length of plain part {top 28 " c.c. both Thickness of plates {crown 13/32 " bottom 5/8 " c.c. both Description of longitudinal joint Furnaces pre welded
Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 155 lbs
End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 1/2 " Pitch of stays 18"x18"
How are stays secured Dble nuts & washers Working pressure by Rules 151.5 lbs
Tube plates: Material {front } Steel Tensile strength { } 26/30 tons Thickness { 7/8 " 5/8 "
Mean pitch of stay tubes in nests 9.375 " Pitch across wide water spaces 13 1/2 " x 7 3/8 " Working pressure {front 159 lb back 156 lb
Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Depth and thickness of girder at centre 7 7/8 " x 1 1/4 " Length as per Rule 30 21/32 " Distance apart 8 3/4 " (max. at Cr.) No. and pitch of stays in each 2 @ 9 3/8 " Working pressure by Rules 151 lbs
Tensile strength 26/30 tons Thickness: Sides 5/8 " Back 3/4 " 23/32 " Top 5/8 " Bottom 5/8 "
Pitch of stays to ditto: Sides 9 1/2 " x 9 3/8 " Back 9 " x 9 " Cr. C.C. Top 9 3/8 " x 8 3/4 " Are stays fitted with nuts or riveted over C.C. margin & side stays are nutted both ends. Remainder of back stays are riveted inside C.C. & nuts outside.
Working pressure by Rules 152 lbs Front plate at bottom: Material Steel Tensile strength 26/30 tons Thickness 7/8 " Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 3/4 "
Pitch of stays at wide water space 13 1/2 " x 9 " Are stays fitted with nuts or riveted over Nuts
Working Pressure 172 lbs Main stays: Material Steel Tensile strength 28/32 tons

Diameter {At body of stay } 2 top stays 2 3/4 " No. of threads per inch 6 Area supported by each stay (18x18) - 4.57 sq. in.
{Over threads } other 2 7/8 "
Working pressure by Rules 155 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 (9 3/8 " x 8 3/4 ") - 1.45 sq. in. C.C. tops

