

# REPORT ON BOILERS.

No. 94780

Rpt. 5a.

Received at London Office - 6 MAR 7  
NEWCASTLE-ON-TYNE

Date of writing Report 19 When handed in at Local Office 5/31 1937 Port of  
No. in Survey held at Newcastle on Tyne Date, First Survey 16 July Last Survey 4/31 1937  
Reg. Book. " (Number of Visits ) Gross 8299  
on the Steel S. Motor Tanker "ABBEYDALE" Tons Net 4936  
Built at Walker By whom built Swan, Hunter & Wigham Richardson Ltd. Yard No. 1506 When built 1937  
Master Sunderland By whom made W. Daxford & Sons Ltd Engine No. When made 1937  
Boilers made at Newcastle By whom made Swan, Hunter & Wigham Richardson, Ltd Boiler No. 1506 When made 1937  
Nominal Horse Power 101. Owners The Admiralty Port belonging to LONDON.

MULTITUBULAR BOILERS - ~~MAIN, AUXILIARY, OR~~ DONKEY. ☒ TWO FURNACE OIL FIRED. ☒

Manufacturers of Steel The Steel Coy. of Scotland, Glasgow (Letter for Record S.)  
Is forced draught fitted ☒ Coal or Oil fired Oil fired only.  
Total Heating Surface of Boilers 1520 sq ft Working Pressure 150 lbs.  
No. and Description of Boilers One S.E. Cylindrical Multitubular Scotch  
Tested by hydraulic pressure to 275 lb. Date of test 27/11/36 No. of Certificate 694 Can each boiler be worked separately ☒  
Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler 2-2 1/2" Cookburn's Improved  
Area of each set of valves per boiler {per Rule 6.95 sq ins Pressure to which they are adjusted 150 lb. Are they fitted with easing gear ☒  
In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main boilers are fitted.  
Smallest distance between boilers or uptakes and bunkers or woodwork 2' 10" Is oil fuel carried in the double bottom under boilers ☒  
Smallest distance between shell of boiler and tank top plating 2' 10" Is the bottom of the boiler insulated ☒  
Largest internal dia. of boilers 11' 4 1/2" Length 11' 6" Shell plates: Material Steel Tensile strength 30/34 tons  
Thickness 3/4" Are the shell plates welded or flanged No Description of riveting: circ. seams end DR Exp.  
long. seams TR. Shell butt straps Diameter of rivet holes in {circ. seams 7/8" Pitch of rivets {5.75"  
Percentage of strength of circ. end seams {plate 69.79% rivets 42.43% Percentage of strength of circ. intermediate seam {plate 85.86% rivets 86.41%  
Percentage of strength of longitudinal joint {combined 89.02% Working pressure of shell by Rules 150 lbs.

No. and Description of Furnaces in each Boiler Two Deighton Corrugated  
Thickens of butt straps {outer 9/16" inner 11/16" Tensile strength 26/30 tons Smallest outside diameter 37 3/16"  
Material Steel Thickness of plates {crown 13/32" bottom 5/8" cc butt. Description of longitudinal joint Furnaces fire welded  
Length of plain part {top 2' 5" c.c. butt. bottom 2' 5" c.c. butt. Working pressure of furnace by Rules 155 lbs  
Dimensions of stiffening rings on furnace or c.c. bottom None Thickness 7/8" Pitch of stays 16 3/8" x 14"  
End plates in steam space: Material Steel Tensile strength 26/30 tons Working pressure by Rules 151 lbs.  
How are stays secured Double nuts & washers. Thickness {7/8" 5/8"  
Tube plates: Material {front Steel Tensile strength {26/30 tons Working pressure {front 158 lbs back 156 lbs  
Mean pitch of stay tubes in nests 9.375" Pitch across wide water spaces 13 1/2" x 7 1/2"  
Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons Depth and thickness of girder  
at centre 7 3/4" x 14" Length as per Rule 29 21/32" Distance apart 9 1/2" No. and pitch of stays  
in each 2 of 9" Working pressure by Rules 152 lbs. Combustion chamber plates: Material Steel  
Tensile strength 26/30 tons Thickness: Sides 5/8" Back 23/32" Top 5/8" Bottom 5/8"  
Pitch of stays to ditto: Sides 9 1/2" x 9 1/2" Back 9" x 8" Top 9 1/2" x 9" Are stays fitted with nuts or riveted over nuts both ends.  
Working pressure by Rules 150 c.c. sides Front plate at bottom: Material Steel Tensile strength 26/30 tons Thickness 7/8"  
Thickens Lower back plate: Material Steel Tensile strength 26/30 Thickness 7/8"  
Pitch of stays at wide water space 14 3/4" x 9" Are stays fitted with nuts or riveted over Nuts  
Working Pressure 210 lbs. Main stays: Material Steel Tensile strength 28/32 tons  
Diameter {At body of stay, 2 top stay 2 1/2" No. of threads per inch 6 Area supported by each stay (15 3/4" x 14 3/4") - 3.26  
Over threads other 2 1/2" Tensile strength 26/30 tons  
Working pressure by Rules 151 lbs. Screw stays: Material Steel Area supported by each stay (9 1/2" x 9 1/2") - 1.73  
Diameter {At turned off part, 1 5/8" x 1 1/2" No. of threads per inch 9

002352-002361-0075

Lloyd's Register  
Foundation



Working pressure by Rules 172<sup>lb</sup> Are the stays drilled at the outer ends No Margin stays: Diameter <sup>At turned off part,</sup> 1 5/8"  
 No. of threads per inch 9 Area supported by each stay (10 3/4 x 9) - 1.73 sq in Working pressure by Rules 160<sup>lb</sup>  
 Tubes: Material IRON External diameter <sup>Plain</sup> 2 1/2" Thickness <sup>Stay</sup> 3/8 + 5/16" No. of threads per inch 9  
 Pitch of tubes 3 3/4 x 3 3/4" Working pressure by Rules 229<sup>lb</sup> Manhole compensation: Size of opening in  
 shell plate 20 x 16" Section of compensating ring 7 3/4 x 3/4 x 2 No. of rivets and diameter of rivet holes 32 - 1 1/8"  
 Outer row rivet pitch at ends 8" Depth of flange if manhole flanged 2 1/2" Steam Dome: Material None  
 Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_  
 Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint <sup>Plate</sup> \_\_\_\_\_  
 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 None Manufacturers of <sup>Tubes</sup> \_\_\_\_\_  
 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

FOR The foregoing is a correct description,  
 SWAN, HUNTER, & WIGHAM RICHARDSON, LTD. Manufacturer.

Dates of Survey <sup>During progress of</sup> work in shops - - See Machinery Report Are the approved plans of boiler and superheater forwarded herewith 15/11/35  
 while building <sup>During erection on</sup> board vessel - - - See Machinery Report (If not state date of approval.)  
 Total No. of visits \_\_\_\_\_

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. British Fame Nov Rpt 94124  
British Indurmer. " " 94275

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

This Donkey Boiler has been built under special survey in accordance with the Rules & approved plan, and the materials & workmanship are good. The Boiler is fitted on top of the O.F. Bunker in the Boiler Space forward of the Engine Room, having access from the top platform of the Eng. Room. The Boiler is fitted for burning oil fuel 3.37 flash point above 150°F under forced draft. and the Safety valves were adjusted under steam to 150 lbs / sq. The accumulation test was satisfactory.

Survey Fee ... See Machinery Report £ 10-2-0 When applied for, 19  
 Travelling Expenses (if any) £ : : When received, 19

A. Watt

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 12 MAR 1937

Assigned

See Nov SE 94780



© 2020

Lloyd's Register  
Foundation