

## REPORT ON BOILERS.

Sld. N<sup>o</sup> 33044  
H<sup>ad</sup> No. 16953.

Received at London Office

DEC 16 1940

Date of writing Report 9/12/40 When handed in at Local Office 10/12/40 Port of MIDDLESBROUGH  
 No. in Reg. Book. Stockton on Tees Date, First Survey 6/12/1940 Last Survey 6/12/1940  
 on the M/V "ANTAR" (Number of Visits 15) Gross Tons 5222 Net Tons 3034  
 Master Sumnerland Built at W. Day & Sons Ltd. By whom built W. Day & Sons Ltd. Yard No. 668 When built 1941  
 Engines made at Sunderland By whom made W. Day & Sons Ltd. Engine No. 668 When made 1941  
 Boilers made at Stockton By whom made Stockton C. Eng. & Ry. Bldg. Co. Boiler No. 6393 When made 1940  
 Nominal Horse Power 516 Owners New Egypt & Luan Shipping Co Port belonging to London

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd (Letter for Record S)  
 Total Heating Surface of Boilers 1660 sq ft Is forced draught fitted Yes Coal or Oil fired oil  
 No. and Description of Boilers 1 - Single Ended Working Pressure 120 lbs  
 Tested by hydraulic pressure to 230 lbs Date of test 6/12/40 No. of Certificate 7009 Can each boiler be worked separately Yes  
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two direct Spring  
 Area of each set of valves per boiler { per Rule 15.40 as fitted 19.20 Pressure to which they are adjusted 120 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 2'-9" Is oil fuel carried in the double bottom under boilers No  
 Smallest distance between shell of boiler and tank top plating 2'-9" Is the bottom of the boiler insulated Yes  
 Largest internal dia. of boilers 11'-10 5/8" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33 tons  
 Thickness 11/16" Are the shell plates welded or flanged No Description of riveting: circ. seams { end 2 R. inter. ✓  
 long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 1/16" long. seams 13/16" Pitch of rivets { 33/8" 53/8"  
 Percentage of strength of circ. end seams { plate 68.50 rivets 45.50 Percentage of strength of circ. intermediate seam { plate ✓ rivets ✓  
 Percentage of strength of longitudinal joint { plate 84.90 rivets 83.38 combined 89.90 Working pressure of shell by Rules 123 lbs  
 Thickness of butt straps { outer 9/16" inner 11/16" No. and Description of Furnaces in each Boiler 2 - corrugated (Deighton)  
 Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-8 1/16"  
 Length of plain part { top ✓ bottom ✓ Thickness of plates { crown 13/32" bottom 13/32" Description of longitudinal joint Weld  
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 131 lbs  
 End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 27/32" Pitch of stays 17" x 16"  
 How are stays secured D. Nuts & washers Working pressure by Rules 142 lbs  
 Tube plates: Material { front Steel back Steel Tensile strength { 26-30 tons Thickness { 27/32" 13/16"  
 Mean pitch of stay tubes in nests 9 3/16" Pitch across wide water spaces 14" Working pressure { front 139 lbs back 249 "  
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder  
 at centre 4" x 5/8" double Length as per Rule 29 7/16" Distance apart 9" No. and pitch of stays  
 in each 2 @ 9" Working pressure by Rules 135 lbs Combustion chamber plates: Material Steel  
 Tensile strength 26-30 tons Thickness: Sides 19/32" Back 9/16" Top 19/32" Bottom 7/8"  
 Pitch of stays to ditto: Sides 9" x 10" Back 8 3/4" x 9 1/2" Top 9" x 9" Are stays fitted with nuts or riveted over Nuts  
 Working pressure by Rules 130 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons  
 Thickness 27/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 27/32"  
 Pitch of stays at wide water space 13 1/2" x 9 1/2" Are stays fitted with nuts or riveted over Nuts  
 Working Pressure 200 lbs Main stays: Material Steel Tensile strength 28-32 tons  
 Diameter { At body of stay 2 1/4" or 2 1/4" No. of threads per inch 6 Area supported by each stay 246.5 sq"  
 Working pressure by Rules 121 lbs Screw stays: Material Steel Tensile strength 26-30 tons  
 Diameter { At turned off part 1 3/8" or 1 3/8" No. of threads per inch 9 Area supported by each stay 49.5 sq"



Working pressure by Rules 125 lb Are the stays drilled at the outer ends No Margin stays: Diameter 1 5/8"  
No. of threads per inch 9 Area supported by each stay 102 sq" Working pressure by Rules 150 lb  
Tubes: Material L.W. Iron External diameter { Plain 2 3/4" Thickness 8 W.G. No. of threads per inch 9  
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules Plain 275 lb Stay 276 Manhole compensation: Size of opening in  
shell plate 20" x 16" Section of compensating ring 7" x 1" No. of rivets and diameter of rivet holes 44 - 15/16"  
Outer row rivet pitch at ends 6" Depth of flange if manhole flanged ✓ 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 { Plate \_\_\_\_\_  
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 \_\_\_\_\_  
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 and on behalf of  
The Corporation of Engineers & Shipbuilders Ltd.  
G. W. Hiley Manufacturer.

Dates of Survey { During progress of work in shops - Jan. 2, 29, March 21, April 14, May 9, July 1, 14, Aug. 28, Sept. 9, 23, Oct. 9, 31, Nov. 8, Dec. 20, Dec. 6.  
while building { During erection on board vessel - - - Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes  
Total No. of visits 15.

Is this Boiler a duplicate of a previous case \_\_\_\_\_ If so, state Vessel's name and Report No. \_\_\_\_\_

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, & Rule Requirements. The material & workmanship are good, on completion the boiler was tested by hydraulic pressure to 230 lbs/sq. inch & found satisfactory. See Sec. Letter 13/3/40 E. This boiler is being forwarded to Sunderland.

This boiler has been securely fixed on board the vessel, & run under steam & safety valves adjusted to working pressure in accordance with rule requirements.

In recommendation please see Memo. Rpt.

W. H. Haas.

Survey Fee ... £ 11 : 2 : - When applied for, 14-12-1940  
Travelling Expenses (if any) £ : : When received, 19

R. J. Easthope.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 28 FEB 1941

Assigned

See Std. JE 33044



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Foundation