

REPORT ON BOILERS.

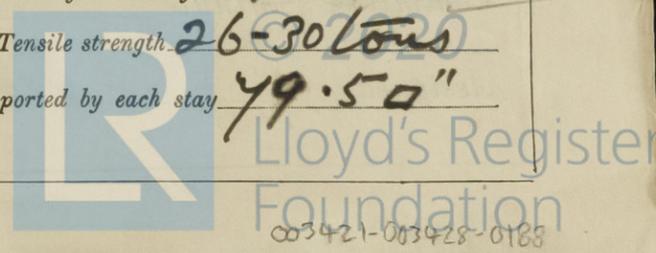
Sld. No. 33044
Hdb. No. 16953.

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. Survey held at Stockton on Tees Date, First Survey _____ Last Survey 6/12/1940
 on the M/V "ANTAR" (Number of Visits 15) } Gross 5222
 Tons } Net 3034
 Master _____ Built at Sunderland By whom built W. Day, Fred & Sons Ltd. Yard No. 668 When built 1941
 Engines made at Sunderland By whom made Wm. Dore, Fildes & Sons Ltd. Engine No. 668 When made 1941
 Boilers made at Stockton By whom made Stockton C. Eng. & Riley Bros. Boiler No. 6393 When made 1940
 Nominal Horse Power 516. Owners New Egypt & Luanan 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 4009 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 } Pressure to which they are adjusted 120 Are they fitted with easing gear Yes
 { as fitted 19.20 }
 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 _____ 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 D.R. }
 { infer. ✓ }
 long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 1/16" } Pitch of rivets { 3 3/8" }
 { long. seams 13/16" } { rivets 5 3/8" }
 Percentage of strength of circ. end seams { plate 68.50 } Percentage of strength of circ. intermediate seam { plate ✓ }
 { rivets 45.50 } { rivets ✓ }
 Percentage of strength of longitudinal joint { plate 84.90 } Working pressure of shell by Rules 123 lbs.
 { rivets 83.38 }
 { combined 89.90 }
 Thickness of butt straps { outer 9/16" } No. and Description of Furnaces in each Boiler 2 - corrugated (Deighton)
 { inner 11/16" } Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-8 1/16"
 Length of plain part { top ✓ } Thickness of plates { crown 13/32" } Description of longitudinal joint Weld
 { bottom ✓ } { bottom ✓ }
 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 } Tensile strength { 26-30 tons } Thickness { 13/16" }
 { back Steel }
 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" } No. of threads per inch 6 Area supported by each stay 246.5 sq"
 { Over threads 2 1/4" }
 Working pressure by Rules 121 lbs Screw stays: Material Steel Tensile strength 26-30 tons
 Diameter { At turned off part, 1 3/8" } No. of threads per inch 9 Area supported by each stay 49.5 sq"
 { Over threads 1 3/8" }



Working pressure by Rules 125 lb Are the stays drilled at the outer ends No Margin stays: Diameter 15/8"
 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
 { Stay 2 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 _____
 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 22 inclusive for boilers been complied with Yes
 For and on behalf of
The London & Lancashire Engine & Shipbuilding Co. 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 Are the approved plans of boiler and superheater forwarded herewith Yes
 { During erection on board vessel - - - } Aug. 28, Sept. 9, 23, Oct. 9, 31, Nov. 8, Dec. 20, Dec. 6. (If not state date of approval.)
 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, & examined under steam & safety valves adjusted to working pressure in accordance with rule requirements.

For 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. Eastrope.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 28 FEB 1941
 Assigned See Std. JE 33044

