

# REPORT ON BOILERS.

Sld. No. 32996  
Inch No. 16906.

Received at London Office

OCT 10 1940

2/10/1940 When handed in at Local Office 3/10/1940 Port of MIDDLESBROUGH  
Survey held at Stockton-on-Tees Date, First Survey 31/5/40 Last Survey 30/9/1940  
on the M/V "FULTALA" (Number of Visits 9) Gross Tons 5051 Net Tons 2828  
Built at Sunderland By whom built W. Bayford & Sons Ltd. Yard No. 664 When built 1940  
Engines made at Sunderland By whom made W. Doxford & Sons Ltd. Engine No. 664 When made 1940  
Boilers made at Stockton By whom made Stockton B. Engrs. & Riley Bros Ltd. Boiler No. 6384 When made 1940  
Original Horse Power 516 Owners British India S. N. Co. Ltd. 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 2209 sq ft Is forced draught fitted no. Coal or Oil fired oil  
and Description of Boilers 1 - Single Ended Working Pressure 120 lbs  
Tested by hydraulic pressure to 230 lbs Date of test 30/9/40 No. of Certificate 7006 Can each boiler be worked separately (Locking Imp.)  
No. of Firegrate in each Boiler 10.20 No. and Description of safety valves to each boiler Two direct Spring. High Lift.  
No. of each set of valves per boiler as fitted 11.86 Pressure to which they are adjusted 120 Are they fitted with easing gear no.  
In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no.  
Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Is oil fuel carried in the double bottom under boilers no.  
Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated no.  
Largest internal dia. of boilers 12'-10 9/16" Length 11'-9" Shell plates: Material Steel Tensile strength 29-33 Tons  
Thickness 23/32" Are the shell plates welded or flanged no. Description of riveting: circ. seams end D.R.  
T.R.D.B.S. Diameter of rivet holes in circ. seams 1 1/16" long. seams 13/16" Pitch of rivets 3 1/4" 5 13/16"  
Percentage of strength of circ. end seams plate 67.0 rivets 59.9 Percentage of strength of circ. intermediate seam plate 86.31 rivets 93.53  
Percentage of strength of longitudinal joint plate 91.20 combined 91.20 Working pressure of shell by Rules 123.5 lbs  
Thickness of butt straps outer 9/16" inner 11/16" No. and Description of Furnaces in each Boiler 3 - Corrugated Morrison  
Material Steel Tensile strength 26-30 tons Smallest outside diameter 36 1/4"  
Length of plain part top 1' bottom 1' Thickness of plates coron 3/8" bottom 3/8" Description of longitudinal joint Weld  
Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 146 lbs  
Plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 29/32" Pitch of stays 18" x 16"  
How are stays secured D. Nuts Working pressure by Rules 135 lbs  
Front plates: Material Steel Tensile strength 26-30 tons Thickness 1 1/16" Working pressure front 121 lbs back 207"  
Pitch of stay tubes in nests 9" Pitch across wide water spaces 13 1/2" Working pressure front 121 lbs back 207"  
Risers to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder 10" x 9"  
Centre 4' 2@ 5/8" Length as per Rule 28" Distance apart 10" No. and pitch of stays 2@ 9"  
Working pressure by Rules 136.5 lbs Combustion chamber plates: Material Steel  
Tensile strength 26-30 tons Thickness: Sides 5/8" Back 19/32" Top 5/8" Bottom 5/8"  
Pitch of stays to ditto: Sides 10" x 9" Back 10" x 9" Top 10" x 9" Are stays fitted with nuts or riveted over Nuts  
Working pressure by Rules 134 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons  
Thickness 1 1/16" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 1 1/16"  
Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over Nuts  
Working Pressure 144 lbs Main stays: Material Steel Tensile strength 28-32 tons  
At body of stay, or Over threads 2 3/8" No. of threads per inch 6 Area supported by each stay 288 sq in  
Working pressure by Rules 136 lbs Screw stays: Material Steel Tensile strength 26-30 tons  
At turned off part, or Over threads 1 1/2" No. of threads per inch 9 Area supported by each stay 900 sq in

Working pressure by Rules 139 lbs Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, or Over threads 1 1/2"  
No. of threads per inch 9 Area supported by each stay 101.25 sq" Working pressure by Rules 124 lbs  
Tubes: Material L.W. Iron External diameter { Plain } 2 1/2" Thickness { 5/16" } No. of threads per inch 9  
Pitch of tubes 3 1/2" x 3 3/4" Working pressure by Rules P. 300 lbs S 244 lbs Manhole compensation: Size of opening  
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  
stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_  
How connected to shell \_\_\_\_\_ Size of doubling plate under dome \_\_\_\_\_ Diameter of rivet holes and  
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  
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 at  
Rules \_\_\_\_\_ Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure  
tubes \_\_\_\_\_, castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks or valves  
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  
STOCKTON CHEMICAL ENGINEERS & BOILER MAKERS LTD.  
The foregoing is a correct description,  
Chas. D. Phipps Manufact

Dates of Survey { During progress of work in shops - - May 31, June 6, July 11, Aug. 13, 26 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
while building { During erection on board vessel - - - Sept. 4, 23, 30  
Total No. of visits 9

Is this Boiler a duplicate of a previous case No 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 Rules & the approved plan. The material & workmanship are good, & on completion the boiler was tested by hydraulic pressure to 230 lbs. & found tight & satisfactory. The boiler is being forwarded to Sunderland for installation on board.

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

In recommendation please see memo Rpt. Port. Sec.

Survey Fee ... £ 14 : 14 : - When applied for, 8-10-1910  
Travelling Expenses (if any) £ : : When received, 10-10-1910

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

Committee's Minute

Assigned See Std. 7.6 32996

