

## REPORT ON BOILERS.

No. 15629

Received at London Office 30 NOV 1949

Date of writing Report 26/11/49 19... When handed in at Local Office 28-11-49 Port of ANTWERP.

No. in Reg. Book 13.C. Survey held at GHEENT. Date, First Survey 1st August Last Survey 3rd November 1949.

5468 on the S/S "TAYWOOD" (EX "TIP 110") (Number of Visits 6) Gross 521 Tons Net

Master Built at THORNE By whom built RICHARD DUNSTON LTD Yard No. When built 1944-11

Engines made at W. HARTLEPOOL By whom made CENTRAL MARINE ENG. WORKS Engine No. When made 1944-

Boilers made at DUNDEE By whom made CALEDON S. & F. CO. LTD Boiler No. When made 1944-

MN of Boiler. Nominal Horse Power 58.8 Owners TAYLOR WOODROW (WEST AFRICA) LTD Port belonging to LONDON.

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel PLATE APPROVED BY BRITISH CORPORATION (Letter for Record)

Total Heating Surface of Boilers 706 sq. ft. Is forced draught fitted NO. Coal or Oil fired OIL FIRED.

No. and Description of Boilers ONE SINGLE ENDED Working Pressure 140 LB/SQ. IN.

Tested by hydraulic pressure to 260 LB/SQ. IN. Date of test No. of Certificate Can each boiler be worked separately

Area of Firegrate in each Boiler 29 sq. ft. No. and Description of safety valves to each boiler TWO SPRING LOADED

Area of each set of valves per boiler per Rule as fitted 6.28 sq. in. Pressure to which they are adjusted 140 LB/SQ. IN. 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 9" to O.F. Bunkers Is oil fuel carried in the double bottom under boilers NO.

Smallest distance between shell of boiler and tank top plating SHELL 18 in. Is the bottom of the boiler insulated YES.

Largest internal dia. of boilers 9' 0" Length 9' 6" Shell plates: Material STEEL Tensile strength

Thickness 2 1/32" Are the shell plates welded or flanged FLANGED Description of riveting: circ. seams end DOUBLE RIVETTED LAP inter TREBLE RIVETTED. DOUBLE BUTT STRAP Diameter of rivet holes in circ. seams 13/16" long. seams 13/16" Pitch of rivets 2.75" 5.55" 12/1/20

Percentage of strength of circ. end seams plate 20.5% rivets 47.3% Percentage of strength of circ. intermediate seam plate 25% rivets 110% combined 92.7% Working pressure of shell by Rules 152 LB/SQ. IN.

Percentage of strength of longitudinal joint plate 25% rivets 110% combined 92.7% Working pressure of shell by Rules 152 LB/SQ. IN.

Thickness of butt straps outer 9/16" inner 11/16" No. and Description of Furnaces in each Boiler TWO PLAIN.

Material STEEL Tensile strength Smallest outside diameter 2' 9"

Length of plain part top bottom Thickness of plates crown 19/32" bottom Description of longitudinal joint ELECTRICALLY WELDED.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 144 LB/SQ. IN.

End plates in steam space: Material Tensile strength Thickness 13/16" Pitch of stays 13" x 15"

How are stays secured DOUBLE NUTS Working pressure by Rules 153 LB/SQ. IN.

Tube plates: Material front STEEL back STEEL Tensile strength Thickness 13/16" 13/16"

Mean pitch of stay tubes in nests 10 3/16" Pitch across wide water spaces 13" Working pressure front 193 LB/SQ. IN. back 161 LB/SQ. IN.

Girders to combustion chamber tops: Material STEEL Tensile strength Depth and thickness of girder at centre 2 x 6" x 9/16" Length as per Rule 24 9/16" Distance apart 7 1/2" No. and pitch of stays in each 2 x 7 1/16" Working pressure by Rules 157 LB/SQ. IN. Combustion chamber plates: Material STEEL

Tensile strength Thickness: Sides 17/32" Back 17/32" Top 7/32" Bottom 11/16"

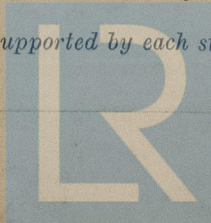
Pitch of stays to ditto: Sides 7 7/16" x 7 1/16" Back 8 x 8" Top 7 7/16" x 7 1/2" Are stays fitted with nuts or riveted over NUTS.

Working pressure by Rules 149 LB/SQ. IN. Front plate at bottom: Material STEEL Tensile strength Thickness 13/16" Lower back plate: Material STEEL Tensile strength Thickness 13/16"

Pitch of stays at wide water space 13" x 8" Are stays fitted with nuts or riveted over NUTS

Working pressure 230 LB/SQ. IN. Main stays: Material STEEL Tensile strength Diameter At body of stay 2 3/8" No. of threads per inch 6 Area supported by each stay 177 SQ. IN.

Working pressure by Rules 197 LB/SQ. IN. Screw stays: Material STEEL Tensile strength Diameter At turned off part 1 3/8" No. of threads per inch 9 Area supported by each stay 64 3/4 SQ. IN.



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Working pressure by Rules. 15813/10" Are the stays drilled at the outer ends. No Margin stays: Diameter { At turned off part, 1 1/2" or Over threads. 1 1/2" Working pressure by Rules. 14913/10" No. of threads per inch. 9 Area supported by each stay. 10 1/2 x 8 Tubes: Material. External diameter { plan 3" Thickness 2 1/2" No. of threads per inch. 9 Pitch of tubes. 12 3/8 x 8 Working pressure by Rules. 31513/10" Manhole compensation: Size of opening in shell plate. 19 1/2 x 15 1/2 Section of compensating ring. FLANGED RING 3/4" No. of rivets and diameter of rivet holes. 114 - 3/16" Outer row rivet pitch at ends. 5 1/2" Depth of flange if manhole flanged. 3" Steam Dome: Material. 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. NONE FITTED Manufacturers of { Tubes. Steel forgings. 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 casing gear. Working pressure as per Rules. Pressure to which the safety valves are adjusted. Hydraulic test pressure: tubes. forgings and 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. The foregoing is a correct description, Manufacturer.

Dates of Survey { During progress of work in shops - - Are the approved plans of boiler and superheater forwarded herewith. NO. (If not state date of approval.) LONDON LETTER 9-8-46 while building { During erection on board vessel - - Total No. of visits. -

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The scantlings compared with approved plans dated 19/8/48

These boilers were constructed to the requirements of the British Admiralty & British Corporation. The boiler has been opened up and examined throughout along with mountings etc. and found to be in a satisfactory condition and strength in my opinion to last the class of 1911/49.

Survey Fee ... £ see Ref 9 : } When applied for, 19.... Travelling Expenses (if any) £ : : } When received, 19....

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 13 JAN 1950

Committee's Minute

Assigned