

pt. 5a.

REPORT ON BOILERS.

No.

Received at London Office

24 NOV 1948

No. of writing Report 192 When handed in at Local Office 192 Port of CARDIFF
 No. in Survey held at CARDIFF Date, First Survey _____ Last Survey 192
 No. on the 362 on the M.V. "KING ALFRED" (Number of Visits _____) Tons { Gross 6919 Net 4151
 Built at GREENOCK By whom built GREENOCK DOCKYARD CO. LD. Yard No. _____ When built 1941
 Lines made at GLASGOW. By whom made BARCLAY CURLE & CO. LTD. Engine No. _____ When made 1941
 Boilers made at GLASGOW By whom made BARCLAY CURLE & CO. LTD. Boiler No. _____ When made 1941
 Indicated Horse Power 687 Owners KING LINE LTD. Port belonging to LONDON

MULTITUBULAR BOILERS ~~MAINXXXXXXXXXXXXXXX~~ DONKEY.

Manufacturers of Steel _____ (Letter for Record _____)
 Heating Surface of Boilers 1,684 Is forced draught fitted Yes Coal or Oil fired Oil
 and Description of Boilers One Multitubular Scotch Boiler Working Pressure 120lbs.
 Tested by hydraulic pressure to 230lbs. Date of test _____ No. of Certificate _____ Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler _____ No. and Description of safety valves to each boiler 2 spring loaded
 Area of each set of valves per boiler { per Rule 15.6 Pressure to which they are adjusted 120lbs. 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 _____ Is oil fuel carried in the double bottom under boilers _____
 Smallest distance between shell of boiler and tank top plating _____ Is the bottom of the boiler insulated _____
 Largest internal dia. of boilers 12'-9" Length 11'-0" Shell plates: Material S.M. steel Tensile strength 29.33
 Thickness 23/32 Are the shell plates welded or flanged flanged Description of riveting: circ. seams { end 3/4 rivets inter. _____
 Seams 3/4 rivets Diameter of rivet holes in { circ. seams 13/16" Pitch of rivets { 2.414
 { long. seams 13/16" { 5.75
 Percentage of strength of circ. end seams { plate 66.36 Percentage of strength of circ. intermediate seam { plate _____
 { rivets 47.41 { rivets _____
 Percentage of strength of longitudinal joint { plate 85.86 Working pressure of shell by Rules 123 lbs.
 { rivets 93.28
 { combined 92.12
 Thickness of butt straps { outer 9/16" No. and Description of Furnaces in each Boiler Three Corrugated (Deighton)
 { inner 11/16" Material S.M. Steel Tensile strength 26.30 Smallest outside diameter 31-4 1/2"
 Thickness of plates { top 8 3/4" { crown 3/8" Description of longitudinal joint _____
 { bottom 8 3/4" { bottom 3/8"
 Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules 130lbs. per sq. in.
 Plates in steam space: Material S.M. Steel Tensile strength 26.30 Thickness 15/16" Pitch of stays 18 1/2" x 18"
 Are stays secured Double nuts and washers Working pressure by Rules 121.4
 Plates: Material { front S.M. steel Tensile strength { 26.30 Thickness { 23/32"
 { back S.M. steel { 26.30 { 11/16"
 Pitch of stay tubes in nests 8 5/8" Pitch across wide water spaces 14 Working pressure { front _____
 { back _____
 Plates to combustion chamber tops: Material S.M. Steel Tensile strength 28.32 Depth and thickness of girder _____
 Centre 8" x 19/32" double length as per Rule _____ Distance apart 9 1/2" No. and pitch of stays _____
 Each 2 9/8" x 10 1/2" Working pressure by Rules 123.6lbs. per sq. in. Combustion chamber plates: Material S.M. Steel
 Tensile strength 26.30 Thickness: Sides 19/32" Back 9/16" Top 19/32" Bottom 19/32"
 of stays to ditto: Sides 9 1/2" x 10 1/2" Back 9 1/8" x 9 1/2" Top 9 1/2" x 10 1/2" Are stays fitted with nuts or riveted over Nuts
 Working pressure by Rules Sides 121 Backs 139 Front plate at bottom: Material S.M. Steel Tensile strength 26.30
 Thickness 23/32" Lower back plate: Material S.M. Steel Tensile strength 26.30 Thickness 21/32"
 of stays at wide water space 9 1/2" x 14" Are stays fitted with nuts or riveted over Nuts
 Working Pressure 122 Main stays: Material S.M. Steel Tensile strength 28.32
 At body of stay, 2 1/2" No. of threads per inch 6 Area supported by each stay 333 sq. ins.
 Over threads _____
 Working pressure by Rules 134 lbs. Screw stays: Material S.M. Steel Tensile strength 26.30
 At turned off part, _____ No. of threads per inch 9 Area supported by each stay 86.68 sq. ins.
 Over threads 1 1/2"

Working pressure by Rules **144 lbs.** Are the stays drilled at the outer ends **No** Margin stays: Diameter ^{At turned off part,} **1 5/8"** _{or Over threads}

No. of threads per inch **9** Area supported by each stay **107 sq. ins.** Working pressure by Rules **142 lbs.**

Tubes: Material **Steel** External diameter ^{Plain} **3"** Thickness ^{Stay} **3"** **10 W.G.** No. of threads per inch **9**

Pitch of tubes **4 1/8" x 4 1/2"** Working pressure by Rules **140** Manhole compensation: Size of opening **20" x 16"**

shell plate. Section of compensating ring **9 1/2" x 23/32"** No. of rivets and diameter of rivet holes **20 - 15/16" holes**

Outer row rivet pitch at ends **6"** Depth of flange if manhole flanged **4"** 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

How connected to shell **-** Inner radius of crown **-** Working pressure by Rules **-** Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell **-**

Type of Superheater

Number of elements **-** Material of tubes **-** Manufacturers of ^{Tubes} **-** _{Steel castings}

Material of headers **-** Tensile strength **-** Thickness **-** Internal diameter and thickness of tubes **-** Can the superheater be shut off and the boiler be worked separately

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 23 inclusive for boilers been complied with **-**

The foregoing is a correct description,

Manufacturer

Dates of Survey ^{During progress of work in shops - -} _{while building} ^{During erection on board vessel - - -} Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits **-**

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

This boiler was built under the Survey of the British Corporation Registry. The material and workmanship is good. The boilers are eligible in our opinion to be classed for a working pressure of 120 lbs.

Survey Fee £ : : } When applied for, 192

Travelling Expenses (if any) £ : : } When received, 192

Harish W. G. Paton & W. E. Dark
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **FIL 1 APR 1943**

Assigned

