

# REPORT ON BOILERS.

Received at London Office -3 MAR 1937

Date of writing Report H 1. 1937 When handed in at Local Office 26<sup>th</sup> FEBRUARY 1937 Port of Greenock

No. in Survey held at Greenock Date, First Survey 5<sup>th</sup> FEBRUARY 1936 Last Survey 27<sup>th</sup> FEBRUARY 1937

Reg. Book. M/S "San Balisto" (Number of Visits 1) (Gross 8010.20 Tons) (Net 4804.43)

on the Greenock

Master J.M. Built at Pielongow By whom built Lithgow & Co. Yard No. 892 When built 1937

Engines made at Greenock By whom made John & T. Macdonald & Co. Engine No. 96K When made 1937

Boilers made at ditto By whom made ditto Boiler No. 1199 When made 1937

Nominal Horse Power 186 Owners Eagle Oil & Shipping Co. Port belonging to London.

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

Manufacturers of Steel Solville Steel Co of Scotland & Sturtevant & Co (Letter for Record S)

Total Heating Surface of Boilers 3380 sq ft Is forced draught fitted Yes ~~Coal~~ Oil fired Oil

No. and Description of Boilers 2 Single Ended Dry Back Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 28-10-36 No. of Certificate 2044 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler Oil Fuel No. and Description of safety valves to each boiler 2 Double Spring

Area of each set of valves per boiler { per Rule 10.8 sq ft as fitted 11.8 sq ft Pressure to which they are adjusted 185 Are they fitted with easing gear Yes

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 Yes Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Yes Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 12-1" Length 10-3" Shell plates: Material S Tensile strength 29.33

Thickness 1" Are the shell plates welded or flanged No Description of riveting: circ. seams DE inter. DE

long. seams TR & DBS Diameter of rivet holes in { circ. seams 1 1/16" long. seams 1 1/32" Pitch of rivets 3" & 4"

Percentage of strength of circ. end seams { plate 65.2 rivets 45.6 Percentage of strength of circ. intermediate seam { plate 85.25 rivets 88.6 combined 88.2 Working pressure of shell by Rules 186

Thickness of butt straps { outer 3/4" inner 7/8" No. and Description of Furnaces in each Boiler 2 Morrison 29 1/2"

Material S Tensile strength 26-30 Smallest outside diameter 3.4"

Length of plain part { top 1 1/2" bottom 1 1/2" Thickness of plates { crown 1 1/2" bottom 1 1/2" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Yes Working pressure of furnace by Rules 180

End plates in steam space: Material S Tensile strength 26-30 Thickness 13/8" Pitch of stays 22"

How are stays secured D N T Washers Working pressure by Rules 219

Tube plates: Material { front S back S Tensile strength { 26.30 Thickness { 15/16"

Mean pitch of stay tubes in nests 9.375" Pitch across wide water spaces 14 1/2" Working pressure { front 193 back 193

Girders to combustion chamber tops: Material S Tensile strength 28.32 Depth and thickness of girder at centre 1 Length as per Rule 1 Distance apart 1 No. and pitch of stays in each 1 Working pressure by Rules 1 Combustion chamber plates: Material S

Tensile strength 1 Thickness: Sides 1 Back 1 Top 1 Bottom 1

Pitch of stays to ditto: Sides 1 Back 1 Top 1 Are stays fitted with nuts or riveted over 1

Working pressure by Rules 1 Front plate at bottom: Material S Tensile strength 26.30

Thickness 15/16" Lower back plate: Material S Tensile strength 26.30 Thickness 15/16"

Pitch of stays at wide water space 1-2 1/2" Are stays fitted with nuts or riveted over 1

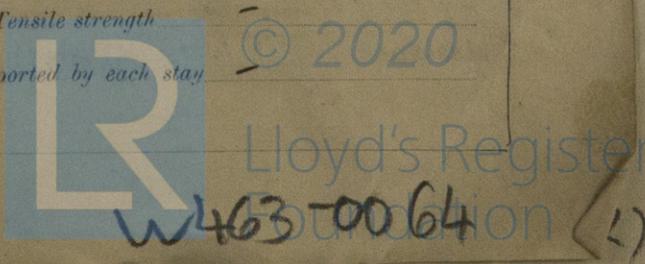
Working Pressure 1 Main stays: Material S Tensile strength 28.32

Diameter { At body of stay 33/8" or 1 No. of threads per inch 6 Area supported by each stay 484 sq in

Working pressure by Rules 186 Screw stays: Material 1 Tensile strength 1

Diameter { At turned off part 1 or 1 No. of threads per inch 1 Area supported by each stay 1

Is a Report also sent on the Hull of the Ship?



Working pressure by Rules  Are the stays drilled at the outer ends  Margin stays: Diameter  At turned off part.  
 No. of threads per inch  Area supported by each stay  Working pressure by Rules  Over threads

Tubes: Material *S* External diameter *2 1/2"* Thickness *3/8"* No. of threads per inch *9*  
 Pitch of tubes *3 3/4" + 3 3/4"* Working pressure by Rules *184* Manhole compensation: Size of opening in shell plate *16 1/2" + 20 1/2"* Section of compensating ring *2-10 1/2" + 2-6 1/2" + 1 1/6"* No. of rivets and diameter of rivet holes *38 at 1 1/4"*  
 Outer row rivet pitch at ends *6 1/4"* Depth of flange if manhole flanged *3 1/2"* 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  
 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  
 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, 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,  
 For JOHN G. KINCAID & CO. LIMITED.  
*W. Carter* Director. Manufacturer.

Dates of Survey  During progress of work in shops - -  
 while building  During erection on board vessel - - -

SEE MACHINERY REPORT

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.) *These Boilers have been built under Special Survey in accordance with the approved plans & the workmanship & material are of good quality. They have been securely fitted on board. This Report accompanies that of the Machinery*

Survey Fee *Charged on Machinery Report* : When applied for. 192  
 Travelling Expenses (if any) : When received. 192

*W. Gordon Kincaid*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 2-MAR 1937**

Assigned **SEE ACCOMPANYING MACHINERY REPORT**

