

REPORT ON BOILERS.

No. 2201

Received at London Office

Date of writing Report 22 - 10 - 1932

When handed in at Local Office 22 - 10 - 1932

Port of

LISBON.

25 OCT 1932

No. in Survey held at
Reg. Book.

LISBON.

Date, First Survey 27 - 8 - 31.

Last Survey

22 - 10 - 1932

67809 on the Twin Screw Steamer "MOÇAMBIQUE"

(Number of Visits 10)

Gross 6052

Tons Net 3770

Master - Built at Glasgow By whom built A. Stephen & Sons, Ltd Yard No. 427 When built 1909

Engines made at Glasgow By whom made A. Stephen & Sons, Ltd. Engine No. 427 When made 1909

Boilers made at Glasgow By whom made A. Stephen & Sons, Ltd. Boiler No. 427 When made 1909

Nominal Horse Power 1282 Owners Cia. Nacional de Navegação. Port belonging to LISBON.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel -

Total Heating Surface of Boilers 11809 sq.ft.

Is forced draught fitted Yes.

(Letter for Record 26-8-31)

Coal or Oil fired Coal.

No. and Description of Boilers Five Single-ended Return Tube.

Working Pressure 190 lbs.

Tested by hydraulic pressure to - Date of test - No. of Certificate - Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 57.74 No. and Description of safety valves to each boiler 2 Spring loaded.

Area of each set of valves per boiler { per Rule 14.4 sq.in. as fitted 16.6 sq.in. Pressure to which they are adjusted 190 lbs. 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 10"

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 14'-9" Length 11'-7"

Shell plates: Material Steel. Tensile strength 28/32 tons.

Thickness 1 7/16" Are the shell plates welded or flanged No.

Description of riveting: circ. seams { end Double Treble

seams Treble

Diameter of rivet holes in { circ. seams 1 7/16" long. seams 1 7/16"

Pitch of rivets { 3 1/2" 9 1/2"

Percentage of strength of circ. end seams { plate 59. rivets 48.5

Percentage of strength of circ. intermediate seam { plate 66.2 rivets 60

Percentage of strength of longitudinal joint { plate 84.8 rivets 83.7 combined 87.8

Working pressure of shell by Rules 212 lbs per sq.in.

Thickness of butt straps { outer (1 3/32" inner (1 3/32"

No. and Description of Furnaces in each Boiler 3 Purves Ribbed.

Material Steel.

Tensile strength 26/30 tons.

Smallest outside diameter 43 1/8"

Length of plain part { top (7'-7 1/4" bottom (7'-7 1/4"

Thickness of plates { crown (19/32" bottom (19/32"

Description of longitudinal joint Firewelded

Dimensions of stiffening rings on furnace or c.c. bottom -

Working pressure of furnace by Rules 208 lbs per sq.in.

End plates in steam space: Material Steel. Tensile strength 26/30 tons. Thickness 1 3/16" Pitch of stays 18"x 16"

How are stays secured Nuts inside and outside. Working pressure by Rules 210 lbs per sq.in.

End plates: Material { front (Steel. back (Steel.

Tensile strength { 26/30 tons

Thickness { 7/8" 13/16"

Can pitch of stay tubes in nests 7 1/2" x 7 1/4" Pitch across wide water spaces 13 1/2"

Working pressure { front 237 lbs per sq.in. back 237 lbs per sq.in.

Girders to combustion chamber tops: Material Steel.

Tensile strength 26/30 tons.

Depth and thickness of girder

Centre 8 7/8" x 3/4" Length as per Rule 21"

Distance apart 8"

No. and pitch of stays

Each Three x 8"

Working pressure by Rules 219 lbs per sq.in.

Combustion chamber plates: Material Steel

Tensile strength

26/30 tons.

Thickness: Sides 21/32"

Back 5/8"

Top 21/32"

Bottom 1"

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

Working pressure by Rules 271 lbs

Front plate at bottom: Material Steel.

Tensile strength 26/30 tons.

Thickness 3/4"

Lower back plate: Material Steel.

Tensile strength 26/30 tons.

Thickness 7/8"

Pitch of stays at wide water space 13.5"

Are stays fitted with nuts or riveted over Nuts.

Working Pressure 284 lbs.

Main stays: Material

Steel.

Tensile strength 28/32 tons.

Pitch of stays { At body of stay, (3 1/8" Over threads (3 1/8"

No. of threads per inch 6

Area supported by each stay 288 sq.in.

Working pressure by Rules 255 lbs.

Screw stays: Material Steel.

Tensile strength 28/32 tons.

Pitch of stays { At turned off part, (1 1/2" Over threads (1 1/2"

No. of threads per inch 11

Area supported by each stay 62 sq.in.

Working pressure by Rules 202 lbs Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, (1 3/4" or Over threads (1 3/4" No. of threads per inch 11 Area supported by each stay 105 sq.in. Working pressure by Rules 173 lbs. Tubes: Material Steel. External diameter { Plain (2 1/2" Thickness { 8 L.S.G. 5/16", 3/8", 1/2" No. of threads per inch 11 Pitch of tubes 30 3/3/4" x 3/7/8" Working pressure by Rules 12 300 lbs per sq.in. Manhole compensation: Size of opening shell plate 20 1/2" x 16 1/2" oval Section of compensating ring 12 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 32" x 1 1/8" Outer row rivet pitch at ends 5" Depth of flange if manhole flanged 3 1/4" 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 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 as 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 23 inclusive for boilers been complied with The foregoing is a correct description, Manufact

Dates of Survey { During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith 24-8-3 (If not state date of approval.) while building { During erection on board vessel - - - Total No. of visits 10

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

All boilers have been examined internally and externally and all doors and mountings. All plates carefully examined and found in good condition. Some plates drilled and gauged and scantlings of boilers verified with plan. The material and workmanship are of good description. All boilers examined under steam and their safety valves adjusted to 190 lbs. per sq.in.

Survey Fee ... £ : : When applied for, 192 Travelling Expenses (if any) £ : : When received, 192

Geo. J. H. L. L.

FRI. 10 FEB 1933 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 24 FEB 1933

TUE. 22 AUG 1933

Assigned See F. L. Rpt.



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