

REPORT ON BOILERS.

No. 11037

Received at London Office

20 SEP 1929

Writing Report 16/8/29 1929 When handed in at Local Office 16/8/29 1929 Port of GENOA

Survey held at GENOA Date, First Survey 2/4/29 Last Survey 24/7 1929

(Number of Visits 6) Tons { Gross 6482 Net 3633

on the M/V "MESSICO" ex "VEJO"

Built at Spezia By whom built Ansaldo San Giorgio Yard No. 195 When built 1921

Engines made at Turin By whom made Ansaldo San Giorgio Engine No. When made 1921

Boilers made at Sampierdarena By whom made G. Ansaldo Boiler No. When made 1921

Indicated Horse Power 431 Owners Soc. Ital. di Nav. & Trasporti Port belonging to Genoa.

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

Manufacturers of Steel - (Letter for Record -)

Total Heating Surface of Boilers 181.4 sq.m. Is forced draught fitted Yes Coal or Oil fired Oil

Name and Description of Boilers 2 Cylindrical Multitubular, single ended Working Pressure 7 kg/cm²

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

Area of Firegrate in each Boiler 3.2 sq.m. No. and Description of safety valves to each boiler 2 Spring Loaded.

Area of each set of valves per boiler { per Rule 8300 sq.m/m as fitted 8200 " " Pressure to which they are adjusted 7 kg/cm² Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No Main Boilers fitted.

Smallest distance between boilers or uptakes and bunkers of 1500 m/m. Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 3000 m/m. Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 3120 m/m. Length 2860 m/m. Shell plates: Material Steel Tensile strength 44.55 Kg/cm²

Thickness 16 m/m. Are the shell plates welded or flanged - Description of riveting: circ. seams { end Double riveted inter. 84.5 m/m. } seams Double riveted. Diameter of rivet holes in { circ. seams 25 m/m. Pitch of rivets { 100.0 m/m. } { long. seams 25 m/m. } Percentage of strength of circ. end seams { plate 70.4% rivets 50.0% } Percentage of strength of circ. intermediate seam { plate - rivets - } Percentage of strength of longitudinal joint { plate 75.0% rivets 94.1% } Working pressure of shell by Rules 7.9 Kg/cm²

Thickness of butt straps { outer 16 m/m. inner 16 m/m. } No. and Description of Furnaces in each Boiler 2 Plain Furnaces.

Material Steel Tensile strength 41.47 kg/cm² Smallest outside diameter 932 m/m.

Thickness of plain part { top 16 m/m. bottom 16 m/m. } Description of longitudinal joint Single riveted lap.

Dimensions of stiffening rings on furnace or c.c. bottom 85 m/m x 85 m/m Working pressure of furnace by Rules 8.3 kg/cm².

Thickness of plates in steam space: Material Steel Tensile strength 41-47 kg/cm² Thickness 19 m/m. Pitch of stays 375 m/m x 370 m/m.

Are stays secured Double nutted through riveted pad pieces Working pressure by Rules 11.9 kg/cm².

Thickness of plates: Material { front Steel Tensile strength 40.5-47.5 kg/cm² Thickness 19 m/m. } { back Steel Tensile strength 40.5-47.5 " " Thickness 18 m/m. }

Pitch of stay tubes in nests 208 m/m x 208 m/m. Working pressure { front 21 kgs/cm² back 18.7 " " }

Thickness of plates to combustion chamber tops: Material Steel Tensile strength 44 - 55 kgs. Depth and thickness of girder

Centre 180 m/m x 18 m/m Length as per Rule 580 m/m Distance apart 188 m/m No. and pitch of stays

Thickness 2 x 180 m/m. Working pressure by Rules 22.75 kgs. Combustion chamber plates: Material Steel

Tensile strength 41-47 kgs. Thickness: Sides 13 m/m. Back 13 m/m Top 13 m/m Bottom 16 m/m.

Thickness of stays to ditto: Sides 170 x 180 Back 180 x 180 Top 180 x 188 Are stays fitted with nuts or riveted over Riveted over.

Working pressure by Rules 7.9 x 8.7 Front plate at bottom: Material Steel Tensile strength 41-47

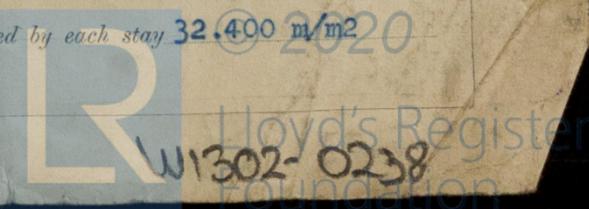
Thickness 19 m/m Lower back plate: Material Steel Tensile strength 41-47 Thickness 19 m/m

Pitch of stays at wide water space 340 m/m Are stays fitted with nuts or riveted over Riveted over

Working Pressure 9.2 kg/cm² Main stays: Material Steel Tensile strength 44-55

Thickness of stay { At body of stay, 55 m/m No. of threads per inch 10 Area supported by each stay 138,750 m/m² } { Over threads - } Working pressure by Rules 9.73 kg/cm² Screw stays: Material Steel Tensile strength 41-47 m/m²

Thickness of stay { At turned off part, 26 m/m No. of threads per inch 10 Area supported by each stay 32,400 m/m² } { Over threads - }



Working pressure by Rules **6.62** Are the stays drilled at the outer ends **No** Margin stays: Diameter ^{At turned off part.} **32 m/m.**
 No. of threads per inch **10** Area supported by each stay **26460 m/m²** Working pressure by Rules **13.9 kg.cm²**
 Tubes: Material **Steel** External diameter ^{Plain} **76 m/m.** Thickness ^{Stay} **3.5 m/m.** No. of threads per inch **10**
 Pitch of tubes **104 m/m** Working pressure by Rules **13 kgs.** Manhole compensation: Size of opening
 shell plate **50 m/m x 400 m/m** thickness of compensating ring **100 m/m x 26 m/m** No. of rivets and diameter of rivet holes **52. 32 m/m dia.**
 Outer row rivet pitch at ends **90 m/m** Depth of flange if manhole flanged **100** 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}
 Internal diameter Working pressure by Rules Thickness of crown No. and diam.
 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
 Number of elements Material of tubes Internal diameter and thickness of tubes
 Material of headers Tensile strength Thickness Can the superheater be shut
 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
 Rules Pressure to which the safety valves are adjusted Hydraulic test pr
 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,

Manufacture

Dates of Survey ^{During progress of work in shops - -} **April 8th, 29th, May 13th, 20th** Are the approved plans of boiler forwarded herewith **Yes**
^{During erection on board vessel - - -} **27th, July 24th** (If not state date of approval.)
 Total No. of visits **Six**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been opened out and examined internally and externally together with their safety valves and mountings. The scantlings have been checked with the approved plan and found correct.**

The condition of the Boilers is good and the workmanship and materials appear to be a good quality. When examined under steam they were found tight and satisfactory. The safety valves have been adjusted to 100 lb. per sq. inch and an accumulation test held with satisfactory results.

Sizes of compression washer are:-

Starboard Boiler.

Port Boiler.

10 m/m Aft. 7 m/m Ford.

19 m/m Aft. 21 m/m Ford.

Survey Fee **See First Entry** When applied for, 192
 Travelling Expenses (if any) £ **Report on Machinery.** When received, 192

G. Clark
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **Vol 4 OCT 1929**
 Assigned *See Gen yph attached*

FRI. 1 NOV '29 TUE. 26 AUG 1930
 TUE. 14 JAN 1930 TUE. 18 NOV 1930
 TUE. 28 JAN 1930 TUE. 24 MAR 1931
 FRI. 7 MAR 1930 TUE. 21 APR 1931
 FRI. 6 JUN 1930
 TUE. 22 JUL 1930

