

REPORT ON BOILERS.

No. 8158

10 MAY 1945

Received at London Office

Date of writing Report 13th Apr. 1945 When handed in at Local Office 13th Apr. 1945 Port of Baltimore, Maryland

No. in Reg. Book. 79299 on the M. V. "LAVORO"

Date, First Survey September 8th, 1944 Last Survey January 17th, 1945

(Number of Visits 8) Tons { Gross 7886
Net 4453

Master Adriatico Built at Trieste By whom built Cantieri Riuniti Dell' Adriatico Yard No. 1212 When built 1938
Engines made at Turin By whom made Soc. An. "FIAT" S.G.M. Engine No. 1212 When made 1938
Boilers made at Trieste By whom made Cantieri Riuniti Dell' Adriatico Boiler No. 1213 When made 1938
Nominal Horse Power 9296 Owners A. Lauro Port belonging to Naples

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

Manufacturers of Steel (Letter for Record)
Total Heating Surface of Boilers 2060 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil
No. and Description of Boilers Two single end Scotch Type Working Pressure 180 lbs.
Tested by hydraulic pressure to 325 lbs. Date of test 22/12/44 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 Two
Area of each set of valves per boiler { per Rule 13.2 sq. ins. Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear Yes
as fitted 15.33 sq. ins.
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 not close Is oil fuel carried in the double bottom under boilers No
Smallest distance between shell of boiler and tank top plating - Is the bottom of the boiler insulated Yes
Largest internal dia. of boilers 12.72' Length 11.5' Shell plates: Material - Tensile strength 26 tons
Thickness 1.18" Are the shell plates welded or flanged flanged Description of riveting: circ. seams { end single rivetted lap
long. seams double rivetted butt Diameter of rivet holes in { circ. seams 1.25" Pitch of rivets { inter. -
long. seams 1.14" Pitch of rivets { plate -
rivets -
Percentage of strength of circ. end seams { plate 74% Percentage of strength of circ. intermediate seam { plate -
rivets 73.5% rivets -
Percentage of strength of longitudinal joint { plate 77.5% Working pressure of shell by Rules 173 lbs.
rivets 85.3% combined 87.2%
Thickness of butt straps { outer .826 No. and Description of Furnaces in each Boiler Two corrugated
inner .944 Tensile strength 26 tons Smallest outside diameter 40.47
Material - Description of longitudinal joint None
Length of plain part { top 10.63 Thickness of plates { crown .55 Working pressure of furnace by Rules 195.6 lbs.
bottom 10.63 bottom .55
Dimensions of stiffening rings on furnace or c.c. bottom None Tensile strength 26 tons Thickness 1.18 Pitch of stays 17.99
End plates in steam space: Material - Working pressure by Rules 290 lbs.
How are stays secured Screwed, nuts each side Thickness 1.125
Tube plates: Material { front - Tensile strength { 26 tons Thickness { .75
back - Tensile strength { 26 tons Working pressure { front 162 lbs.
back 162 lbs.
Mean pitch of stay tubes in nests 7.5" Pitch across wide water spaces 13.375" Depth and thickness of girder
Girders to combustion chamber tops: Material - Tensile strength 26 tons No. and pitch of stays
at centre 9.84" x .629" Length as per Rule - Distance apart 7.99"
in each 3 - 7.08" Working pressure by Rules 231 Combustion chamber plates: Material -
Tensile strength 26 tons Thickness: Sides .66 Back .7 Top .66 Bottom .78
Pitch of stays to ditto: Sides 7.08 Back 8.2 Top 7.99 Are stays fitted with nuts or riveted over riveted
Working pressure by Rules 193 lbs. Front plate at bottom: Material - Tensile strength 26 tons
Thickness 1.02 Lower back plate: Material - Tensile strength 26 tons Thickness .90
Pitch of stays at wide water space 11.8" Are stays fitted with nuts or riveted over nuts
Working Pressure 329 Main stays: Material - Tensile strength 26 tons
Diameter { At body of stay, 2.99 No. of threads per inch 6 Area supported by each stay 150 sq. in.
Over threads - Screw stays: Material - Tensile strength 26 tons
Working pressure by Rules 195 No. of threads per inch 9 Area supported by each stay 85 sq. ins.
Diameter { At turned off part, 1.5" Over threads -



Working pressure by Rules **343 lbs.** Are the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, or Over threads **1.75"**
No. of threads per inch **9** Area supported by each stay **48 sq. ins.** Working pressure by Rules **378 lbs.**
Tubes: Material External diameter { Plain **2.5"** Thickness { **.143"** No. of threads per inch **9**
Pitch of tubes **7.48** Working pressure by Rules **235 lbs.** Manhole compensation: Size of opening in shell plate **15.74" x 11.8"** Section of compensating ring **11.8"** No. of rivets and diameter of rivet holes **2 rows 1.14"**
Outer row rivet pitch at ends **8.66** Depth of flange if manhole flanged **3.74"** 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 **-** 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 easing 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 **Yes**
while building { During erection on board vessel **-** (If not state date of approval.)
Total No. of visits **-**

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

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

Both boilers have been examined throughout at this time and the workmanship and quality of material appears to be of a standard satisfactory for Classification with this Society.

Survey Fee ... £ **\$90.00** When applied for, **Apr. 13, 19 45**
Travelling Expenses (if any) £ **-** When received, **19**

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK APR 18 1945

J. A. B.

Assigned 2 S.B. - 180 lb □



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