

REPORT ON BOILERS.

No. 9592

SINGLE ENDED.

Received at London Office

12 OCT 1926

Date of writing Report 9. Oct. 1926 When handed in at Local Office 9 Oct. 1926 Port of Genoa

No. in Reg. Book. 81459 on the Lloyd's So. "Roma"

Master Built at Sestri Ponente, Genoa By whom built Messrs Ansaldo. S.A. Yard No. 244 When built 1926

Engines made at Sanpierdanna - Genoa By whom made Messrs Ansaldo. S.A. Engine No. 441-4 When made 1926

Boilers made at Sanpierdanna - Genoa By whom made Messrs Ansaldo. S.A. Boiler No. 2849 When made 1926

Nominal Horse Power 5553. Owners Messrs Navigazione Gen. Italiana Port belonging to Genoa.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs Fried Krupp, Akt. Ges., Essen Germany. (Letter for Record S. ✓)

ALL Total Heating Surface of Boilers 5500 sqm. (4.58 = 1000 sqm) Is forced draught fitted yes. ✓ Coal or Oil fired oil. ✓

No. and Description of Boilers 4 S.E. Multitubular Scotch type Working Pressure 15.46 kg/cm²

Tested by hydraulic pressure to 26.4 kg/cm² Dates of test 21.9.25 No. of Certificate 159 v 160 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. Spring loaded. ✓

Area of each set of valves per boiler {per Rule 111.32 mm² as fitted 14200 mm² Pressure to which they are adjusted 15.5 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 ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 470 mm Is oil fuel carried in the double bottom under boilers yes. ✓

Smallest distance between shell of boiler and tank top plating 600 mm Is the bottom of the boiler insulated yes. ✓

Largest internal dia. of boilers 4,900 Length 3411 Shell plates: Material Steel Tensile strength 49-55 ✓

Thickness 37 mm Are the shell plates welded or flanged Description of riveting: circ. seams {end D.R. zig zag. ✓ inter. 116.62 mm ✓

long. seams T.R. D. Butt Strap Diameter of rivet holes in {circ. seams 40.5 mm. ✓ long. seams 40.5 mm. ✓ Pitch of rivets { 263. mm. ✓

Percentage of strength of circ. end seams {plate 65.3 % rivets 42.4 % Percentage of strength of circ. intermediate seam {plate ✓ rivets ✓

Percentage of strength of longitudinal joint {plate 84.6 % rivets 87.4 % combined 84 % Working pressure of shell by Rules 15.5 kg/cm²

Thickness of butt straps {outer 33 mm inner 33 mm No. and Description of Furnaces in each Boiler 3 Morison Suspension type. ✓

Material Steel Tensile strength 41-47 ✓ Smallest outside diameter 1238 mm.

Length of plain part {top 19 mm bottom 19 mm Thickness of plates {crown 19 mm bottom 19 mm Description of longitudinal joint Welded ✓

Dimensions of stiffening rings on furnace or c.c. bottom 80 x 80 x 15 mm Working pressure of furnace by Rules 15.8 kg/cm²

End plates in steam space: Material Steel Tensile strength 41-47 ✓ Thickness 24 mm Pitch of stays 390 x 380

How are stays secured Double nuts, washers outside, stays secured Working pressure by Rules 14.9 kg/cm²

Tube plates: Material {front Steel Tensile strength { 41-47 ✓ Thickness { 25 mm ✓ back Steel Thickness { 20 mm ✓

Mean pitch of stay tubes in nests 216 x 216 Pitch across wide water spaces 346 Working pressure {front 14.3 kg/cm² back 20.5 kg/cm²

Girders to combustion chamber tops: Material Steel Tensile strength 44-50 ✓ Depth and thickness of girder

at centre 200 mm - 200 mm Length as per Rule 463.5 mm Distance apart 190 mm No. and pitch of stays

in each 3 - 190 mm Working pressure by Rules 14.6 kg/cm² Combustion chamber plates: Material Steel ✓

Tensile strength 41-47 ✓ Thickness: Sides 14.5 mm Back 14.5 mm Top 14.5 mm Bottom 25 mm

Pitch of stays to ditto: Sides 190 x 190 mm Back 190 x 190 mm Top 190 x 190 mm Are stays fitted with nuts or riveted over nuts ✓

Working pressure by Rules 20 kg/cm² Front plate at bottom: Material Steel Tensile strength 41-47 ✓

Thickness 25 mm Lower back plate: Material Steel Tensile strength 41-47 ✓ Thickness 24 mm

Pitch of stays at wide water space 381 x 190 mm Are stays fitted with nuts or riveted over nuts ✓

Working Pressure 18.4 kg/cm² Main stays: Material Steel Tensile strength 44-50 ✓

Diameter {At body of stay, 63 mm ✓ or 40 mm No. of threads per inch 6. ✓ Area supported by each stay 148200 sqm.

Working pressure by Rules 14 kg/cm² Screw stays: Material Steel Tensile strength 41-47 ✓

Diameter {At turned off part, 35 mm ✓ or 40 mm No. of threads per inch 9. ✓ Area supported by each stay 361,00 mm²



Working pressure by Rules *14.4 kg/cm²* Are the stays drilled at the outer ends *yes* Margin stays: Diameter { At turned off part, *46 mm*
 No. of threads per inch *9* Area supported by each stay *43290 mm²* Working pressure by Rules *14.65 kg/cm²*
 Tubes: Material *Steel* External diameter { Plain *46 mm* Thickness *4 mm* No. of threads per inch *9*
 Pitch of tubes *108 x 108 mm* Working pressure by Rules *14.5 kg/cm²* Manhole compensation: Size of opening in
 shell plate *430 x 360* Section of compensating *plate 950 x 1090 x 33 mm* No. of rivets and diameter of rivet holes *18 - 40.5 mm*
 Outer row rivet pitch at ends *263 mm* Depth of flange if manhole flanged *110* Steam Dome: Material *Steel*
 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 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
 Number of elements Material of tubes Steel castings
 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 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 *Yes*

"ANSALDO, Società Anonima
 STABILIMENTO MECCANICO
 SAMPIERDENA

The foregoing is a correct description,
H. S. Morrison 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 *yes*
 (If not state date of approval.)
 Total No. of visits

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

This vessels Boilers have been constructed under Special Survey in accordance with the Societys Rules, Approved plans, Tested materials and Secretarys letters.
The materials and workmanship are good.

Please see Machinery report & report for Double Ended Boilers

Survey Fee ... *See Machinery Report* When applied for, *9-10-1926*
 Travelling Expenses (if any) ... When received, *192*

H. R. Morrison
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 15 OCT 1926*

Assigned *See Minutes on*
attached rpt. Gen 9592

FRI. 10 DEC 1926

FRI. 21 JAN 1927