

REPORT ON BOILERS.

No. 7861

5 MAR 1928

Received at London Office

Date of writing Report Feb 23 1928 When handed in at Local Office Feb 24 1928 Port of Trieste

No. in Reg. Book. 39799 Survey held at Glasgow & Manfalcone Date, First Survey 7.12.27 Last Survey 21.2.1928
(Number of Visits ten) Gross Tons 5640 Net Tons 3322
on the S. S. Astra III

Master _____ Built at Manfalcone By whom built Lantini Nav. Triestino Yard No. 186 When built 1928
Engines made at Glasgow By whom made D. Rowan & Co. Ltd. Engine No. 866 When made 1927
Boilers made at Glasgow By whom made D. Rowan & Co. Ltd. Boiler No. 866 When made 1927
Nominal Horse Power 651 Owners "Astra" Cia Argentina de Petrolio Soc. An. Port belonging to Buenos Aires

See also Glasgow Report No 47198

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

Manufacturers of Steel Fried. Krupp A. G. Friedrich Alfred Hütte of Rheinhausen (Letter for Record S)

Total Heating Surface of Boilers 9615 Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers 3 S.B. Working Pressure 200 lbs

Tested by hydraulic pressure to 350 lbs Date of test 14.10.27 No. of Certificate 17639 Can each boiler be worked separately yes

Area of Firegrate in each Boiler — No. and Description of safety valves to each boiler two direct spring loaded

Area of each set of valves per boiler {per Rule 22.36 sq" as fitted 25.13 sq" Pressure to which they are adjusted 205 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 or woodwork — Is oil fuel carried in the double bottom under boilers yes

Smallest distance between shell of boiler and tank top plating 27" Is the bottom of the boiler insulated no

Largest internal dia. of boilers 16'-3" Length 12'-0" Shell plates: Material Steel Tensile strength 28-32 T

Thickness 1 5/32" Are the shell plates welded or flanged no Description of riveting: circ. seams {end 8.9" inter. — long. seams 50 S 4.9" Diameter of rivet holes in {circ. seams 1 5/16" 1 1/2" Pitch of rivets {3.41" 3.47" 10 5/16"

Percentage of strength of circ. end seams {plate 61.5 64 rivets 44.5 47.5 Percentage of strength of circ. intermediate seam {plate — rivets —

Percentage of strength of longitudinal joint {plate 85.45 rivets 89.3 combined 88.8 Working pressure of shell by Rules 200 lbs

Thickness of butt straps {outer 1 1/8" inner 1 1/4" No. and Description of Furnaces in each Boiler Three Dighton

Material Steel Tensile strength 26-30 T Smallest outside diameter 46.28"

Length of plain part {top — bottom — Thickness of plates {crown 41/64" bottom 64" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom — Working pressure of furnace by Rules 202 lbs

End plates in steam space: Material Steel Tensile strength 26-30 T Thickness 1 5/8" Pitch of stays 23" x 18" 22" x 20"

How are stays secured 5 91 Working pressure by Rules 208 & 201 lbs

Tube plates: Material {front Steel back " Tensile strength {26-30 T Thickness {27/32" 25/32"

Mean pitch of stay tubes in nests 10.281" Pitch across wide water spaces 13 1/2" Working pressure {front 207 lbs back 208 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 T Depth and thickness of girder

at centre 2 @ 8 7/8" x 7/8" Length as per Rule 34.56" Distance apart 9" No. and pitch of stays

in each three 8 1/4" Working pressure by Rules 200 lbs Combustion chamber plates: Material Steel

Tensile strength 26-30 T Thickness: Sides 21/32" Back 21/32" Top 21/32" Bottom 27/32"

Pitch of stays to ditto: Sides 8 1/4" x 9" Back 8 1/2" x 8 3/4" Top 8 1/4" x 9" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 201 lbs Front plate at bottom: Material Steel Tensile strength 26-30 lbs

Thickness 27/32" Lower back plate: Material Steel Tensile strength 26-30 T Thickness 51/64"

Pitch of stays at wide water space 13 1/2" x 8 1/2" Are stays fitted with nuts or riveted over nuts

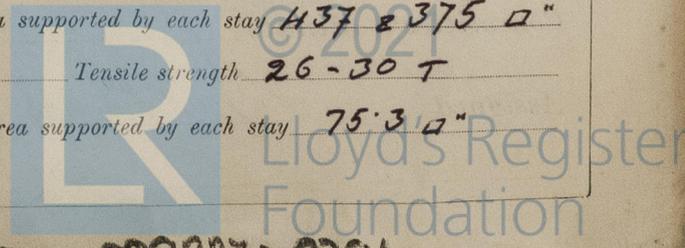
Working Pressure 203 lbs Main stays: Material Steel Tensile strength 28-32 T

Diameter {At body of stay, 3 1/4" & 3" No. of threads per inch 6 Area supported by each stay 437 & 375 sq"

Working pressure by Rules 212 & 209 lbs Screw stays: Material Steel Tensile strength 26-30 T

Diameter {At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 75.3 sq"

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Working pressure by Rules 202 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8" or Over threads

No. of threads per inch 9 Area supported by each stay 94.50" Working pressure by Rules 225

Tubes: Material Iron External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 8 WG 3/8" No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 5/8" Working pressure by Rules 275 lbs Manhole compensation: Size of opening in shell plate 15 1/2" x 19 1/2" Section of compensating ring 8 3/4" x 1 5/32" No. of rivets and diameter of rivet holes 32 @ 1 1/2"

Outer row rivet pitch at ends 10 1/2" Depth of flange if manhole flanged 3" Steam Dome: Material none

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 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 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 23 inclusive for boilers been complied with

The foregoing is a correct description, Manufacturer

Dates of Survey { During progress of work in shops - - - } See Glasgow Report 47198 Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)

{ During erection on board vessel - - - } Dec 7, 15, 1928 Jan 25, Feb 2, 6, 9, 15, 17, 21, 24 Total No. of visits ten

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

These Boilers have been constructed at Glasgow under special survey and satisfactorily fitted on board by the Cantieri Navali Triestini at Monfalcone. The installation for oil fuel has been fitted as per approved plans and in accordance with the requirements of Sect 35 of the Rule 1926-27.

Survey Fee See Machinery Report When applied for, 192

Travelling Expenses (if any) £ : : When received, 192

R. P. ...
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 13 MAR 1928

Assigned See P. 11 attached

