

REPORT ON BOILERS.

No. 82032

16 NOV 1927

Received at London Office

Date of writing Report 12/11 1927 When handed in at Local Office 14/11/1927 Port of Newcastle-on-Tyne.

No. in Reg. Book. 32486 Survey held at North Shields. Date, First Survey 21 Oct. Last Survey 4 Nov 1927

on the Twin screw steamer "PRINCIPELE BARBU STIRBEY" (Number of Visits —) Gross 3032 Tons Net 1647

Master Built at Einsharden By whom built J. Fredericks & Co. Yard No. ✓ When built 1912.

Engines made at Altona By whom made Ottersen Eisenwerk AG Engine No. ✓ When made 1920.

Boilers made at Altona By whom made Ottersen Eisenwerk AG. Boiler No. ✓ When made

Nominal Horse Power 319. Owners Steaua Romana Soc. Anon Port belonging to Constantza.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Unknown. ✓ (Letter for Record S. ✓)

Total Heating Surface of Boilers 4520 ²⁵⁸ Is forced draught fitted Yes. ✓ Coal or Oil fired Oil only. ✓

No. and Description of Boilers 2 Single ended multitubular return tube ✓ Working Pressure 185 ✓

Tested by hydraulic pressure to 200 ✓ Date of test 2-13/11/27 No. of Certificate ✓ 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 Direct Spring. ✓

Area of each set of valves per boiler ^{per Rule} 17.5 ✓ Pressure to which they are adjusted 185 ✓ 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 6'-0" ✓ Is oil fuel carried in the double bottom under boilers No. ✓

Smallest distance between shell of boiler and tank top plating Open floors. ✓ Is the bottom of the boiler insulated No. ✓

Largest internal dia. of boilers 14'-1 5/16" Length 11'-5 13/16" Shell plates: Material Steel Tensile strength 28/34-32-38

Thickness 1 1/8" ✓ Are the shell plates welded or flanged No. ✓ Description of riveting: circ. seams ^{end} Double ✓

long. seams Quadruple ✓ Diameter of rivet holes in ^{circ. seams} 1 3/16" ✓ ^{inter.} Double ✓

Percentage of strength of circ. end seams ^{plate} 69.7 ✓ ^{long. seams} 13/16" ✓ Pitch of rivets 3.894 ✓

Percentage of strength of circ. intermediate seam ^{plate} 40.8 ✓ ^{inter.} Double ✓

Percentage of strength of longitudinal joint ^{plate} 85% as allowed Working pressure of shell by Rules 144 13 kg/cm² = 185 app²

Thickness of butt straps ^{outer} 1 1/8" ✓ ^{inner} 7/8" ✓ No. and Description of Furnaces in each Boiler 3 Corrugated 3 motion

Material Steel ✓ Tensile strength 26/30 ✓ Smallest outside diameter 3'-4 1/16" ✓

Length of plain part ^{top} 17/32" ✓ ^{bottom} 17/32" ✓ Description of longitudinal joint Weld. ✓

Dimensions of stiffening rings on furnace or c.e. bottom ✓ Working pressure of furnace by Rules 192 ✓

End plates in steam space: Material Steel ✓ Tensile strength 2.59/26.03 Thickness 63/64" ✓ 19 1/16" x 1 1/32" ✓

How are stays secured Double nuts & riveted doubling Working pressure by Rules 219 ✓

Tube plates: Material ^{front} Steel ✓ ^{back} Steel ✓ Tensile strength 2.59/26.03 Thickness 7/8" ✓

Mean pitch of stay tubes in nests 10 1/8" Pitch across wide water spaces 14.14/3 ✓ Working pressure ^{front} 193 ✓ ^{back} 263 ✓

Girders to combustion chamber tops: Material Steel ✓ Tensile strength 2.59/26.03 Depth and thickness of girder

at centre 8 3/32" x 13/16" ✓ Length as per Rule 29 33/64" ✓ Distance apart 4 1/8" ✓ No. and pitch of stays

in each 2 @ 8 3/32" ✓ Working pressure by Rules 218 ✓ Combustion chamber plates: Material Steel ✓

Tensile strength 2.59/26.03 Thickness: Sides 21/32" ✓ Back 21/32" ✓ Top 21/32" ✓ Bottom 21/32" ✓

Pitch of stays to ditto: Sides 8 3/32" x 1 1/8" ✓ Back 4 1/4" x 8 3/32" ✓ Top 8 3/32" x 1 1/8" ✓ Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules 214 ✓ Front plate at bottom: Material Steel ✓ Tensile strength 2.59/26.03

Thickness 1 1/64" ✓ Lower back plate: Material Steel ✓ Tensile strength 2.59/26.03 Thickness 1 1/64" ✓

Pitch of stays at wide water space 14 31/64" ✓ Are stays fitted with nuts or riveted over Nuts ✓

Working Pressure 200 Main stays: Material Steel ✓ Tensile strength 2.59/26.03

Diameter ^{At body of stay,} 3 5/32" ✓ ^{or} " ✓ No. of threads per inch " ✓ Area supported by each stay 2.59/26.03 ✓

Working pressure by Rules 298 ✓ Screw stays: Material Steel ✓ Tensile strength 2.59/26.03 ✓

Diameter ^{At turned off part,} 1 5/32" ✓ ^{or} " ✓ No. of threads per inch " ✓ Area supported by each stay 8 3/32" x 1 1/8" ✓

W14-0133

Working pressure by Rules **223** Are the stays drilled at the outer ends **No.** Margin stays: Diameter **1 63/64**
 No. of threads per inch **11** Area supported by each stay **8 57/64 x 14 39/64** Working pressure by Rules **215**
 Tubes: Material **Steel** External diameter **3** Thickness **3/32 (840G)** No. of threads per inch **11**
 Pitch of tubes **4.01 x 4.09** Working pressure by Rules **250** Manhole compensation: Size of opening in
 shell plate **11 13/16 x 15 3/4** Section of compensating ring **8 57/64 x 1 1/8** No. of rivets and diameter of rivet holes **32 @ 1 3/16**
 Outer row rivet pitch at ends Depth of flange if manhole flanged **No.** 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 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 **Schmidt** Manufacturers of Tubes **Not Known**
 Number of elements **30** Material of tubes Internal diameter and thickness of tubes **5/8 3/16**
 Material of headers Tensile strength Thickness Can the superheater be shut off and
 the boiler be worked separately **Yes** Is a safety valve fitted to every part of the superheater which can be shut off from the boiler **Yes**
 Area of each safety valve **1.4 sq"** Are the safety valves fitted with easing gear **Yes** Working pressure as per
 Rules **185 lbs/sq" app.** Pressure to which the safety valves are adjusted **185 lbs/sq"** Hydraulic test pressure:
 tubes castings and after assembly in place **Yes** 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 **See Truly Report** Are the approved plans of boiler and superheater forwarded herewith
 while building **See Truly Report** (If not state date of approval.)
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **Please see Truly Rpt.**
Attached.

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

W. H. Hasew.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **25 NOV 1927**
 Assigned **See Truly Rpt attached**

FRI. 27 JAN 1928