

Part of the report copies Genoa No 9987.

REPORT ON BOILERS.

No. 7869

19 MAR 1928

Rpt. 5a.

Received at London Office

Date of writing Report

192

When handed in at Local Office

Mar 12 1928

Port of

Trieste

No. in Reg. Book.

Survey held at

Riva Trigoso + Trieste

Date, First Survey

Riva Trigoso 21.2.27.

Riva Trigoso 23.7.27.

Trieste 19.8.27

Last Survey Trieste 24.2.1928

No. 225

on the

s/s "CONTE GRANDE"

(Number of Visits 23)

Gross

25661

Net

15303

Master

Built at

Trieste

By whom built

Stab. Sec. Triestino

Yard No. 764

When built

1928

Engines made at

Trieste

By whom made

Stab. Sec. Triestino

Engine No. 78-81

When made

1928

Boilers made at

Riva Trigoso

By whom made

Cantieri del Tirreno

Boiler No. 725

When made

1927.

Nominal Horse Power

4512

Owners

Lloyd Sabatini

Port belonging to

Genoa.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Messrs August Thyssen Hütte Gesellschaft, Mülheim Ruhr

(Letter for Record 5)

Total Heating Surface of Boilers

584 sq m.

Is forced draught fitted

Ylo.

Coal or Oil fired

oil

No. and Description of Boilers

2 single ended multitubular scotch type

Working Pressure

220 lb/sq in. 15.46 Kg/cm²

Tested by hydraulic pressure to

267 Kg/cm²

Date of test

19.4.27

No. of Certificate

195

Can each boiler be worked separately

Ylo.

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 spring loaded cockburn high lift.

Area of each set of valves per boiler

per Rule

13000 sq in.

as fitted

8800 sq in.

Pressure to which they are adjusted

225 lb/sq in.

Are they fitted with easing gear

Ylo.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Ylo.

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Is oil fuel carried in the double bottom under boilers

Ylo.

Smallest distance between shell of boiler and tank top plating

14"

Is the bottom of the boiler insulated

Ylo.

Largest internal dia. of boilers

5030 mm

Length

3492 mm

Shell plates: Material

steel

Tensile strength

44-50 Kg/mm²

Thickness

41.5 mm

Are the shell plates welded or flanged

Description of riveting: circ. seams

end DR22

Long. seams

T.R.O.B.S.

Diameter of rivet holes in

circ. seams

40 mm

Pitch of rivets

100 mm

Percentage of strength of circ. end seams

plate

60%

rivets

49.5%

Percentage of strength of circ. intermediate seam

plate

85.3%

rivets

Percentage of strength of longitudinal joint

plate

84.96%

combined

87.7%

Working pressure of shell by Rules

15.46 Kg/cm²

Thickness of butt straps

outer 32 mm

inner 35 mm

No. and Description of Furnaces in each Boiler

4 Morrison

Material

steel

Tensile strength

41-47

Smallest outside diameter

1057 mm

Length of plain part

top

bottom

Thickness of plates

crown

16 mm

bottom

16 mm

Description of longitudinal joint

welded.

Dimensions of stiffening rings on furnace or c.c. bottom

nil

Working pressure of furnace by Rules

15.56 Kg/cm²

End plates in steam space: Material

steel

Tensile strength

41-47

Thickness

31 mm

Pitch of stays

468 x 432 mm

How are stays secured

Double nuts and washers

Working pressure by Rules

15.56 Kg/cm²

Tube plates: Material

front steel

back steel

Tensile strength

41-47

Thickness

23 mm

Lean pitch of stay tubes in nests

270 mm x 210 mm

Pitch across wide water spaces

356 mm

Working pressure

front 15.9 Kg/cm²

back 15.7 Kg/cm²

Girders to combustion chamber tops: Material

steel

Tensile strength

44-50 Kg/cm²

Depth and thickness of girder

centre

232 mm x 200 mm

Length as per Rule

446.5 mm

Distance apart

203 mm

No. and pitch of stays

each

20 228

Working pressure by Rules

21.7 Kg/cm²

Combustion chamber plates: Material

steel

Tensile strength

41 207

Thickness: Sides

17.5 mm

Back

18.5 mm

Top

17.5 mm

Bottom

22 mm

Pitch of stays to ditto: Sides

228 mm x 203 mm

Back

254 mm x 203 mm

Top

228 mm x 203 mm

Are stays fitted with nuts or riveted over

hulls

Working pressure by Rules

16 Kg/cm²

Front plate at bottom: Material

steel

Tensile strength

41-47

Thickness

23 mm

Lower back plate: Material

steel

Tensile strength

41-47

Thickness

24 mm

Pitch of stays at wide water space

387 mm x 203 mm

Are stays fitted with nuts or riveted over

hulls

Working Pressure

19.5 Kg/cm²

Main stays: Material

steel

Tensile strength

44-50

Diameter

At body of stay,

85 mm

Over threads

85 mm

No. of threads per inch

6 per inch

Area supported by each stay

468 mm x 432 mm

Working pressure by Rules

19.7 Kg/cm²

Screw stays: Material

steel

Tensile strength

41-47

Diameter

At turned off part,

44 mm

Over threads

44 mm

No. of threads per inch

9 per inch

Area supported by each stay

203 mm x 254 mm

002830-002837-0183

Working pressure by Rules 15.56 Kg/cm^2 Are the stays drilled at the outer ends. No Margin stays: Diameter { At turned off part, 57 1/2 x 50.8 mm Over threads 57 1/2 x 50.8 mm

No. of threads per inch 9 Area supported by each stay 36743 sq mm Working pressure by Rules 29.4 Kg/cm²

Tubes: Material steel External diameter { Plain 46 mm Thickness { 4 mm No. of threads per inch 9 Stay 46 mm 9.57 x 84 mm

Pitch of tubes 108 mm x 105 mm Working pressure by Rules 17.5 Kg/cm² Manhole compensation: Size of opening

shell plate 300 mm x 400 mm Section of compensating ring flange plate No. of rivets and diameter of rivet holes 40 - 40 mm

Outer row rivet pitch at ends 273 mm Depth of flange if manhole flanged 102 mm 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

stays Inner radius of crown Working pressure by Rules

How connected to shell Size of doubling plate under dome Diameter of rivet holes and p

of rivets in outer row in dome connection to shell

See Manchester Rpt. Type of Superheater Smoke tube type Manufacturers of { Tubes The Superheater Co Ltd Manchester Steel castings do.

Number of elements 148 Material of tubes S.D. steel Internal diameter and thickness of tubes 16 mm x 3 mm

Material of headers wrought steel Tensile strength See certificate Thickness 1 mm 5/8 Can the superheater be shut off

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 1960 mm² Are the safety valves fitted with easing gear Yes Working pressure as

Rules See certificate Pressure to which the safety valves are adjusted 225 lb/sq in Hydraulic test press

tubes 1000 lb/sq in castings 660 lb/sq in and after assembly in place hot tests Are drain cocks or valves

to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,
Segnal Fabbrica del Ferro
Stabilimento Meccanico di
Rim Ingresso (I) Manufact

See London Rpt. 9

Dates of Survey { During progress of work in shops - - - 2.2.27, 3.3.27, 11.3.27, 8.4.27, 29.4.27, 2.5.27, 9.5.27, 23.5.27, 27.6.27 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building { During erection on board vessel - - - 1927 Aug 19, Sep 2.6, Oct 11.19, 25. Nov 8. 18. Dec 5. 21. 23. 28. 1928 Jan 5. 9. 24. 29. Feb 2. 4. 11. 17. 20 23. 26. Total No. of visits Trieste 23

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed

tested materials under special survey and in accordance with approved plans, Secretary's letter

Rule requirements. The workmanship and materials are good and when tested hydraulically to

26.70 Kg/cm² were found tight and satisfactory. These boilers are intended for the S.P. Cinto

now building at Trieste and will be eligible in my opinion to be classed in the Register Book

have been satisfactorily fitted on board, all safety valves and mountings fitted, safety valves

under steam and accumulator tests satisfactorily carried out. Copy of this report has been sent

Trieste. The boilers have been stamped for identification as follows:

No 195	No 196
Lloyd's Test	Lloyd's Test
T.P. 26.70 Kg/cm ²	T.P. 26.70 Kg/cm ²
W.P. 15.46 Kg/cm ²	W.P. 15.46 Kg/cm ²
G.C.V. 19.7.27.	G.C.V. 23.7.27.
S.C.V.	S.C.V.

tests carried out satisfactorily

in place, then safety valves adjusted under steam, and the whole seen under working

conditions and found in order. These boilers are eligible in my opinion to

Survey Fee ... See heavy Rpt. When applied for, 192

Travelling Expenses (if any) ... When received, 192

(Signed) G. Clark Taux. & V. Lockney.
Engineer Surveyor to Lloyd's Register of Ship

Committee's Minute TUES. 3 APR 1928

Assigned See Rpt. attached