

## REPORT ON BOILERS.

No. 12516

Received at London Office

MAY 18 1939

Date of writing Report

10

When handed in at Local Office

13.5.39

Port of

Trieste

No. in Survey held at  
Reg. Book.

TRIESTE &amp; MONFALCONE

Date, First Survey

1st March 1938

Last Survey

2nd May

1939

18666 on the

"JAMES J. MAGUIRE"

(Number of Visits

36)

Gross

10525

Tons

Net

6065

Master

Built at

MONFALCONE

By whom built

CANT. RIVINATI 90.

Yard No.

1207

When built

1939

Engines made at

TURIN

By whom made

FIAT. S.G.M.

Engine No.

2567

When made

1939

Boilers made at

TRIESTE

By whom made

CANT. RIVINATI DEL ADRIATICO

Boiler No.

1819

When made

1939

Nominal Horse Power

183 x 2

Owners

ORIENTAL TANKER L.D.

Port belonging to

LONDON

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

DEUTSCHE RÖHRENWERKE A.G.

Manufacturers of Steel

WITKOWITZER BERGBAU &amp; ÜESTER. ALPINE MONTAN. G.

(Letter for Record

S.)

Total Heating Surface of Boilers

256 m<sup>2</sup>

Is forced draught fitted

YES

Coal or Oil fired

OIL BURNING

No. and Description of Boilers

2. CYLINDRICAL MARINE BOILERS.

Working Pressure

14 kg/cm<sup>2</sup>  
(200 LBS)

Tested by hydraulic pressure to

350 LBS

Date of test

4.7.38

No. of Certificate

322

Can each boiler be worked separately

YES

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 SPRING DIRECT LOADED.

Area of each set of valves per boiler

per Rule 10322 m<sup>2</sup>/m<sup>2</sup>  
as fitted 15707.9 m<sup>2</sup>/m<sup>2</sup>

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

Smallest distance between shell of boiler and

DECK plating

24"

Is the bottom of the boiler insulated

YES

Largest internal dia. of boilers

4400 m/m.

Length

3690 m/m.

Shell plates: Material

S.M.S.

Tensile strength

44-55 kg/cm<sup>2</sup>

Thickness

34 m/m.

Are the shell plates welded or flanged

NO

Description of riveting: circ. seams

end

DOUBLE 215-2 AF

long. seams

TREA. D.B.S.T.

Diameter of rivet holes in

circ. seams

25 m/m.

Pitch of rivets

106.28 m/m.

Percentage of strength of circ. end seams

plate 61%

rivets 77%

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 84%

rivets 94.2%

combined 82.2%

Working pressure of shell by Rules

16.5 kg/cm<sup>2</sup>

Thickness of butt straps

outer 27 m/m.

inner 30 m/m.

No. and Description of Furnaces in each Boiler

3 CORRUGATE MORISON TYPE

Material

S.M.S.

Tensile strength

41-47 kg/cm<sup>2</sup>

Smallest outside diameter

1080 m/m.

Length of plain part

top 225 m/m.

bottom 225 x 305 m/m.

Thickness of plates

crown 15 m/m.

bottom 15 m/m.

Description of longitudinal joint

WELDED.

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

NONE

Working pressure of furnace by Rules

14.2 kg/cm<sup>2</sup>

End plates in steam space: Material

S.M.S.

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

33 m/m.

Pitch of stays

480 x 420 m/m.

How are stays secured

PASS THROUGH PLATE &amp; FITTED WITH NUTS INS. &amp; OUT.

Working pressure by Rules

16.5 kg/cm<sup>2</sup>

Tube plates: Material

front S.M.S.

back S.M.S.

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

23 m/m.

Mean pitch of stay tubes in nests

220 x 360 m/m.

Pitch across wide water spaces

367 m/m.

Working pressure

front 17.8 kg/cm<sup>2</sup>back 17.8 kg/cm<sup>2</sup>

Girders to combustion chamber tops: Material

S.M.S.

Tensile strength

44-55 kg/cm<sup>2</sup>

Depth and thickness of girder

at centre 250 m/m. 18 m/m.

Length as per Rule

970 m/m.

Distance apart

220 m/m.

No. and pitch of stays

in each

3 PITCH 205 m/m.

Working pressure by Rules

15.4 kg/cm<sup>2</sup>

Combustion chamber plates: Material

S.M.S.

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness: Sides

19 m/m.

Back

19 m/m.

Top

19 m/m.

Bottom

23 m/m.

Pitch of stays to ditto: Sides

205 x 185 m/m.

Back

190 x 190 m/m.

Top

205 x 220 m/m.

Are stays fitted with nuts or riveted over

NUTS.

Working pressure by Rules

19.7 kg/cm<sup>2</sup>

Front plate at bottom: Material

S.M.S.

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

23 m/m.

Lower back plate: Material

S.M.S.

Tensile strength

41-47 kg/cm<sup>2</sup>

Thickness

22 m/m.

Pitch of stays at wide water space

367 x 190 m/m.

Are stays fitted with nuts or riveted over

NUTS &amp; RIVETED OVER.

Working Pressure

22.1 kg/cm<sup>2</sup>

Main stays: Material

S.M.S.

Tensile strength

44-50 kg/cm<sup>2</sup>

Diameter

At body of stay, or Over threads

22.47 m/m.

No. of threads per inch

9.

Area supported by each stay

201600 m/m<sup>2</sup>

Working pressure by Rules

16.4 kg/cm<sup>2</sup>

Screw stays: Material

S.M.S.

Tensile strength

41-47 kg/cm<sup>2</sup>

Diameter

At turned off part, or Over threads

39 m/m.

No. of threads per inch

9.

Area supported by each stay

36400 m/m<sup>2</sup>



Working pressure by Rules  $16.6 \text{ kg/cm}^2$  Are the stays drilled at the outer ends NO Margin stays: Diameter { At turned off part, or Over threads  $54 \text{ mm}$ .  
No. of threads per inch 9 Area supported by each stay  $37925 \text{ mm}^2$  Working pressure by Rules  $34.15 \text{ kg/cm}^2$   
Tubes: Material S.M.S. External diameter { Plain  $83 \text{ mm}$ . Stay  $83 \text{ mm}$ . Thickness {  $4 \text{ mm}$ .  $12 \text{ mm}$ . No. of threads per inch 9.  
Pitch of tubes  $220 \times 220 / 220 \times 367 \text{ mm}$  Working pressure by Rules  $17.8 \text{ kg/cm}^2$  Manhole compensation: Size of opening in shell plate  $560 \times 460 \text{ mm}$  Section of compensating ring  $34 \times 650 \text{ mm}$  No. of rivets and diameter of rivet holes  $42; 35 \text{ mm}$ .  
Outer row rivet pitch at ends  $180 \text{ mm}$  Depth of flange if manhole flanged  $101 \text{ mm}$  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 OF WITHWITZER BERGHAU. E.S.  
Number of elements 22 Material of tubes STEEL Internal diameter and thickness of tubes  $32 \times 38 \text{ mm}$ .  
Material of Headers S.M.S. Tensile strength  $42.4 - 43.6 \text{ kg/mm}^2$  Thickness  $22 \text{ mm}$  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  $31808 \text{ mm}^2$  (FOR TWO VALVES) Are the safety valves fitted with easing gear YES Working pressure as per Rules  $14.15 \text{ kg/cm}^2$  (200 LBS). Pressure to which the safety valves are adjusted  $210 \text{ LBS}$ . Hydraulic test pressure: tubes  $42 \text{ kg/cm}^2$  forgings and castings  $42 \text{ kg/cm}^2$  and after assembly in place  $15.15 \text{ kg/cm}^2$  Are drain cocks or valves fitted to free the superheater from water where necessary YES.

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with YES.

Cantieri Riuniti dell'Adriatico  
FABBRICA MACCHINE S. ANDREA

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops - 1938 Mar 1, 3, 9, 31, Apr 1, 5, 7, 14, 26, May 6, 11, 23, 24.  
while building { During erection on board vessel - 1939 Feb 13, 28, Mar 2, 8, 14, 15, 21, Apr 6, 17, 25  
May 1, 2. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
Total No. of visits 36.

Is this Boiler a duplicate of a previous case YES. If so, state Vessel's name and Report No. M/S. EDWY. P. BROWN - (N° 12042).  
M/S. JOHN. A. BROWN - (N° 12086).

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers and Superheaters have been constructed under Special Survey in accordance with the Rules and approved plans, and Secretary letter. The materials and the workmanship are good. The Boilers mountings have been examined and found in order, and duly stamped and numbered for identification. The Boilers have been satisfactorily fitted on board and securely fastened. The safety valves were adjusted to blow at 205 lbs. - The certificates of materials for these Boilers and for the Boilers Nos. 1818 & 1821, intended for sister ship Nos. 1208 are herewith attached. -

Survey Fee ... £ 338/- When applied for, 13/5/39  
Travelling Expenses (if any) £ ✓ When received, 7/5/39

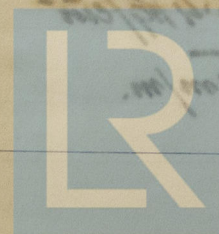
For. Sp. ...  
Engineer Subordinate to Lloyd's Register of Shipping

Committee's Minute

FRI 26 MAY 1939

Assigned

See Tri. F.C. 12516



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