

# REPORT ON BOILERS.

No. 16722

-1 SEP 1927

Received at London Office

Date of writing Report 27 Aug 1927 When handed in at Local Office

Port of Rotterdam

No. in Survey held at Schiedam

Date First Survey 20 Jul 27 Last Survey 25 Aug 1927

on the S.S. Peradovic

(Number of Visits 9) Gross 5340.0 Tons Net 3410.3

Master Built at Tegesack By whom built Bremen Vulcan Yard No. When built 1904

Engines made at Tegesack By whom made Bremen Vulcan Engine No. 499 When made 1904

Boilers made at Tegesack By whom made Bremen Vulcan Boiler No. 254/256 When made 1904

Nominal Horse Power 535 Owners Jugoslovensko Amerikanska Plovidba Belonging to Split

## MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

RETAIN

Manufacturers of Steel ? (Letter for Record (S))

Total Heating Surface of Boilers  $3 \times 217 = 651 \text{ sq. ft.}$  Is forced draught fitted Yes

No. and Description of Boilers 3 Multitubular marine boilers Working Pressure 227 lb. per sq. in.

Tested by hydraulic pressure to ? Date of test ? No. of Certificate ? Can each boiler be worked separately Yes

Area of Firegrate in each Boiler  $15 \text{ sq. ft.}$  No. and Description of safety valves to each boiler 2 Spring loaded

Area of each set of valves per boiler per Rule as fitted  $0.9 \text{ sq. in.}$  Pressure to which they are adjusted 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 over 2 feet Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2 feet Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers  $43.50 \text{ m.}$  Length  $36.87 \text{ m.}$  Shell plates: Material S.M. Steel Tensile strength 45-50 k.g.?

Thickness  $30 \text{ mm.}$  Are the shell plates welded or flanged Description of riveting: circ. seams end lap 2x riv. inter.  $135 \text{ mm.}$

Long. seams Double butt 4x riv. Diameter of rivet holes in circ. seams  $36 \text{ mm.}$  Pitch of rivets  $536 \text{ mm.}$

Percentage of strength of circ. end seams plate  $43.3\%$  rivets  $30.6\%$  Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate  $42.5\%$  rivets  $104\%$  combined  $96.5\%$  Working pressure of shell by Rules  $10.1 \text{ k.g.}$

Thickness of butt straps outer  $20 \frac{1}{2} \text{ mm.}$  inner  $20 \frac{1}{2} \text{ mm.}$  No. and Description of Furnaces in each Boiler 3 Doughton

Material S.M. Steel Tensile strength ? Smallest outside diameter  $42.8 \text{ m.}$

Length of plain part top bottom Thickness of plates crown  $\frac{1}{16} \text{ m.}$  bottom  $\frac{1}{16} \text{ m.}$  Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules  $240 \text{ lb.}$

End plates in steam space: Material S.M. Steel Tensile strength  $37-42 \text{ k.g.}$  Thickness  $27 \frac{1}{2} \text{ mm.}$  Pitch of stays  $300 \times 300 \text{ mm.}$

How are stays secured Thread in plate nuts inside & outside Working pressure by Rules  $17 \text{ k.g.}$

Tube plates: Material front S.M. Steel back S.M. Steel Tensile strength  $37-42 \text{ k.g.}$  Thickness  $27 \frac{1}{2} \text{ mm.}$

Lean pitch of stay tubes in nests  $303 \times 202 \text{ mm.}$  Pitch across wide water spaces  $350 \text{ mm.}$  Working pressure front  $19 \text{ k.g.}$  back  $20 \text{ k.g.}$

Orders to combustion chamber tops: Material S.M. Steel Tensile strength ? Depth and thickness of girder

centre  $260 \times 2 \times 19 \frac{1}{2} \text{ mm.}$  Length as per Rule  $849 \frac{1}{2} \text{ mm.}$  Distance apart  $200 + 100 \text{ mm.}$  No. and pitch of stays

each  $3 \text{ at } 200 \text{ mm.}$  Working pressure by Rules  $21 \text{ k.g.}$  Combustion chamber plates: Material S.M. Steel

Tensile strength  $37-42 \text{ k.g.}$  Thickness: Sides  $10 \text{ mm.}$  Back  $17 \frac{1}{2} \text{ mm.}$  Top  $10 \text{ mm.}$  Bottom  $24 \text{ mm.}$

Pitch of stays to ditto: Sides  $100-(100-210)$  Back  $100 \times 109 \text{ mm.}$  Top  $200/200-109 \text{ mm.}$  Are stays fitted with nuts or riveted over fitted with nuts

Working pressure by Rules  $21 \text{ k.g.}$  Front plate at bottom: Material S.M. Steel Tensile strength  $37-42 \text{ k.g.}$

Thickness  $27 \text{ mm.}$  Lower back plate: Material S.M. Steel Tensile strength  $37-42 \text{ k.g.}$  Thickness  $26 \text{ mm.}$

Pitch of stays at wide water space  $350 \text{ mm.}$  Are stays fitted with nuts or riveted over fitted with nuts

Working Pressure  $24.9 \text{ k.g.}$  Main stays: Material S.M. Steel Tensile strength  $30-45 \text{ k.g.}$

Diameter At body of stay  $74 \text{ mm.}$  -  $61 \text{ mm.}$  No. of threads per inch 6-5 Area supported by each stay  $144400-114000 \text{ mm.}^2$

Over threads  $3 \frac{1}{4} \text{ m.}$  -  $2 \frac{3}{4} \text{ m.}$  Screw stays: Material S.M. Steel Tensile strength  $30-45 \text{ k.g.}$

Working pressure by Rules  $19.0 \text{ k.g.}$  No. of threads per inch 8 Area supported by each stay  $35532 \text{ mm.}^2$

Diameter At turned off part, or Over threads  $1 \frac{5}{8} \text{ m.}$



Working pressure by Rules 17.169. Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or Over threads 1 1/2"  
No. of threads per inch 0 Area supported by each stay 47.866 Working pressure by Rules 17.5 h.g.  
Tubes: Material iron External diameter { Plain 40 mm. Thickness { 4 mm. No. of threads per inch 11  
Pitch of tubes 100 x 101 mm. Working pressure by Rules 20.3 h.g. Manhole compensation: Size of opening 412 x 40 mm.  
shell plate 360 x 460 mm. Section of compensating ring 950 x 1050 mm. No. of rivets and diameter of rivet holes 412 x 40 mm.  
Outer row rivet pitch at ends 7" - 8" Depth of flange if manhole flanged 80 mm. Steam Dome: Material iron  
Tensile strength iron Thickness of shell iron Description of longitudinal joint iron  
Diameter of rivet holes iron Pitch of rivets iron Percentage of strength of joint { Plate Rivets iron  
Internal diameter iron Working pressure by Rules iron Thickness of crown iron No. and diameter of rivets iron  
stays iron Inner radius of crown iron Working pressure by Rules iron  
How connected to shell iron Size of doubling plate under dome iron Diameter of rivet holes iron  
of rivets in outer row in dome connection to shell iron

Type of Superheater iron Manufacturers of { Tubes iron Steel castings iron  
Number of elements iron Material of tubes iron Internal diameter and thickness of tubes iron  
Material of headers iron Tensile strength iron Thickness iron Can the superheater be shut off from the boiler iron  
the boiler be worked separately iron Is a safety valve fitted to every part of the superheater which can be shut off from the boiler iron  
Area of each safety valve iron Are the safety valves fitted with easing gear iron Working pressure iron  
Rules iron Pressure to which the safety valves are adjusted iron Hydraulic test pressure iron  
tubes iron castings iron and after assembly in place iron Are drain cocks or valves iron  
to free the superheater from water where necessary iron

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with No  
The foregoing is a correct description, iron

Dates of Survey { During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith No  
while building { During erection on board vessel - - - (If not state date of approval.) 10/5/27  
Total No. of visits iron

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
Examined the mountings and Safety valves of the three boilers and found in order.  
Scanling found as per approved plan.

Survey Fee ... £ : : When applied for, 192  
Travelling Expenses (if any) £ 7.00 When received, 192

Committee's Minute TUES. 20 SEP 1927  
Assigned See Repair Rpt  
Rot 16722  
TUE. 12 NOV 1929  
FRI. 18 MAY 1928  
FRI. 20 OCT 1927  
TUES. 22 MAY 1928  
TUES. 15 MAY 1928  
FRI. 24 AUG 1928  
FRI. 21 JUN 1929  
FRI. 28 JUN 1929  
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