

REPORT ON BOILERS.

BREMEN No. 1945.
HAM. No. 22237

Copied from Hamburg Rpt 22237
now completed Bremen

Received at London Office 17. March 1917 JUN 26 1937

BREMEN : 24. 6. 17

Date of writing Report 11th March 1917

When handed in at Local Office

19

Port of *Hamburg & Bremen*

No. in Reg. Book

Survey held at

HAMBURG & WESERMÜNDE

Date, First Survey

8th January

Last Survey

1st Feb.

19 *17*

88442 on the *Single Sc. Vessel*

GAMBIAN

(Number of Visits *8+4*)

Gross *5452*

Net *3106*

Built at *WESERMÜNDE*

By whom built *DESCHIMAG, WERK: SEEBECK*

Yard No. *571*

When built *1917*

Engines made at *BREMEN*

By whom made *DESCHIMAG, WERK: A. G. WESER*

Engine No. *138/129*

When made *1917*

Boilers made at *HAMBURG*

By whom made *DEUTSCHE WERFT A.G.*

Boiler No. *695*

When made *1917*

Owners *LEVER BROS. TORONTO*

Port belonging to *FREETOWN*

VERTICAL DONKEY BOILER.

Made at *Hamburg* By whom made *Mem. Deutsche W. A. G.* Boiler No. *695* When made *1917* Where fixed *Engine Room*

Manufacturers of Steel *Mem. Gutehoffnungshütte AG. Walsruhe, Bochum*

Total Heating Surface of Boiler *22 m²*

Is forced draught fitted *yes*

Coal or Oil fired *oil*

No. and Description of Boilers *One vertical Donkey Boiler*

Working pressure *7 kg/cm²*

Tested by hydraulic pressure to *14 kg/cm²*

Date of test *1. 2. 17*

No. of Certificate *655*

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler *two spring loaded*

Area of each set of valves per boiler { per rule *1714 mm²*
as fitted *3150 mm²*

Pressure to which they are adjusted *7 kg/cm²* Are they fitted with easing gear *yes*

State whether steam from main boilers can enter the donkey boiler *no*

Smallest distance between boiler or uptake and bunkers

or woodwork *yes* Is oil fuel carried in the double bottom under boiler *no*

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated *no*

Largest internal dia. of boiler *1400 mm* Height *3325 mm*

Shell plates: Material *P. M. Steel*

Tensile strength *41-47 kg/cm²*

Thickness *10 mm*

Are the shell plates welded or flanged *flanged*

Description of riveting: circ. seams { end *single row*
inter. *double row*

long. seams *two rows*

Dia. of rivet holes in { circ. seams *20 mm*
long. seams *20 mm*

Pitch of rivets { *48 mm*
65.5 mm

Percentage of strength of circ. seams { plate *98.3 %*
rivets *97.4 %*

of Longitudinal joint { plate *99.4 %*
rivets *98.2 %*
combined *91 %*

Working pressure of shell by rules *7.95 kg/cm²*

Thickness of butt straps { outer *10 mm*
inner *10 mm*

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat *yes*

Material *P. M. Steel*

Tensile strength *41-47 kg/cm²*

Thickness *12 mm*

Radius *1120 mm*

Working pressure by rules *8.75 kg/cm²*

Description of Furnace: *Plain, spherical, or dished crown* *yes*

Material *P. M. Steel*

Tensile strength *41-47 kg/cm²*

Thickness *15 mm*

External diameter { top *1050 mm*
bottom *1150 mm*

Length as per rule *1150 mm*

Working pressure by rules *7.85 kg/cm²*

Pitch of support stays circumferentially *yes*

and vertically *yes*

Are stays fitted with nuts or riveted over *no*

Diameter of stays over thread *yes*

Radius of spherical or dished furnace crown *yes*

Working pressure by rule *no*

Thickness of Ogee Ring *15 mm*

Diameter as per rule { D *1400 mm*
d *1150 mm*

Working pressure by rule *7.85 kg/cm²*

Combustion Chamber: Material *P. M. Steel*

Tensile strength *41-47 kg/cm²*

Thickness of top plate *15 mm*

Radius if dished *1120 mm*

Working pressure by rule *11.1 kg/cm²*

Thickness of back plate *15 mm*

Diameter if circular *1150 mm*

Length as per rule *1150 mm*

Pitch of stays *180/180 mm*

Are stays fitted with nuts or riveted over *fitted with nuts*

Diameter of stays over thread *26.17 mm*

Working pressure of back plate by rules *10.4 kg/cm²*

Tube Plates: Material { front *P. M. Steel*
back *P. M. Steel*

Tensile strength { *41-47 kg/cm²*
41-47 kg/cm²

Thickness { *18 mm*
18 mm

Mean pitch of stay tubes in nests *178/267 mm*

If comprising shell, Dia. as per rule { front *yes*
back *yes*

Pitch in outer vertical rows { *89 mm*
89 mm

Dia. of tube holes FRONT { stay *70 mm*
plain *63.5 mm*

BACK { stay *63.5 mm*
plain *63.5 mm*

Is each alternate tube in outer vertical rows a stay tube *yes*

Working pressure by rules { front *9.58 kg/cm²*
back *9.58 kg/cm²*

Girders to combustion chamber tops: Material *yes*

Tensile strength *yes*

Depth and thickness of girder at centre *yes*

Length as per rule *yes*

Distance apart *yes*

No. and pitch of stays in each *yes*

Working pressure by rule *yes*

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Lloyd's Register

003421-003422-0251

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Crown stays: Material ✓ Tensile strength ✓ Diameter { at body of stay, ✓
No. of threads per inch ✓ Area supported by each stay ✓ Working pressure by rules ✓
Screw stays: Material P. M. Steel Tensile strength 41-42 kg/cm² Diameter { at turned off part, 23.17 ✓
Area supported by each stay 65500 Working pressure by rules as appr. over threads 26.17 ✓ No. of threads per inch 9
Tubes: Material P. M. Steel External diameter { plain 63.5 ✓ Thickness { 3.25 ✓
No. of threads per inch 9 Pitch of tubes 89/89 ✓ Working pressure by rules 12.5 kg/cm² ✓
Manhole Compensation: Size of opening in shell plate 300/400 ✓ Section of compensating ring 600/700/10 ✓ No. of rivets and diameter
of rivet holes 27 rivets 20 ✓ Outer row rivet pitch at ends 135 ✓ Depth of flange if manhole flanged ✓
Uptake: External diameter ✓ Thickness of uptake plate ✓
Cross Tubes: No. ✓ External diameters { ✓ Thickness of plates ✓

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

The foregoing is a correct description,
DEUTSCHE WERFT A.G.
signed _____ Manufacturer.

Dates of Survey { During progress of work in shops - 8th/11th/14th/20th/24th/27th/30th January
while building { During erection on board vessel - 2/4, 3/5, 5/6, 8/6, 17
Is the approved plan of boiler forwarded herewith 2. 10. 1936
(If not state date of approval.)
Total No. of visits 8 + 4

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) Material and Workmanship of the
vertical Donkey Boiler are of good quality. The materials used in its construction are made of
works recognized by the Committee and tested by the Port Surveyors in accordance with the
requirements of the Rules. This Donkey Boiler having been made under Special Permit
in conformity with the appr. plan, the Permit's letter and otherwise in compliance
with the requirements of the Rules is eligible in my opinion to be classed in
the Port Register Book with the notation: + DB pressure 7 kg/cm².
This Donkey Boiler has been shipped to Wesermünde where it will be fitted on
board of the vessel No 571 now under construction.

Pressure 25.6.37. This Donkey Boiler has been satisfactorily installed
on board, tested under steam, and its safety valves have been correctly
adjusted to 7 kg/cm².

Thickness of adjusting washers:

forward 6 mm

ast 7.5 mm

A. Carstensen

Survey Fee ... RM 84.00 : Hamburg
Travelling Expenses (if any) RM 5.00 : When applied for, 12. 3. 1937
When received, 13. 4. 1937 } See also Ham Lpt. 22237

Sign. H. SCHLOTHAUER
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 2 JUL 1937
Assigned See other F.E. report