

## REPORT ON BOILERS.

No. 967.

Received at London Office

20 JUN 1927

Writing Report 5th June 1927 When handed in at Local Office 19 Port of Bremen

in Book

Survey held at

Bremen

Date, First Survey

7th Sept. 1926

Last Survey

3rd June 1927

1927

on the

Single Sc. "MITTELMEER"

(Number of Visits 8)

Gross 6370

Net 3658

at

Bremen

By whom built

Deutsche Schiff. u. Maschinenbau A.G. Werk A.G. Weser

Yard No.

863

When built

1926/27

engines made at

-1-

By whom made

-1-

Engine No.

M 98

When made

1926/27

boilers made at

-1-

By whom made

-1-

Boiler No.

1185

When made

1926/27

for

Bremer Öl-Transport G.m.b.H.

Port belonging to

Bremen

## VERTICAL DONKEY BOILER.

at

Bremen

By whom made

Deutsche Schiff. u. Maschinenbau A.G. Werk A.G. Weser

Boiler No.

1185

When made

1926/27

Where fixed

fore end of motor space

Manufacturers of Steel

Mannesmannröhren-Werke, Akt. Schulz-Schmidt, Mülheim.

Heating Surface of Boiler

23.5 sq. meters

Is forced draught fitted

✓

Coal or Oil fired

oil

and Description of Boilers

1 vertical multitubular

Working pressure

5 kg/cm<sup>2</sup>

Tested by hydraulic pressure to

11 kg/cm<sup>2</sup>

Date of test

29/11/26

No. of Certificate

✓

No. of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2 spring loaded

of each set of valves per boiler

per rule 2862 mm.<sup>2</sup>  
as fitted 2 x 1963.5

Pressure to which they are adjusted

5 kg/cm<sup>2</sup>

Are they fitted with easing gear

yes

Whether steam from main boilers can enter the donkey boiler

no

Smallest distance between boiler or uptake and bunkers

Bottomwork

680 mm.

Is oil fuel carried in the double bottom under boiler

no

Smallest distance between base of boiler and tank top plating

50 mm.

Is the base of the boiler insulated

yes

Largest internal dia. of boiler

1700 mm.

Height

3770 mm.

plates: Material

S. M. steel

Tensile strength

34-41 kg/cm<sup>2</sup>

Thickness

12 mm.

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end...

single

long. seams

double

of rivet holes in

circ. seams 23 mm

Pitch of rivets

59 mm

Percentage of strength of circ. seams

plate 61 %  
rivets 50 %

of Longitudinal joint

plate 68.5 %  
rivets 81 %  
combined

Working pressure of shell by rules

7.45 kg/cm<sup>2</sup>

Thickness of butt straps

outer 15 mm.  
inner ✓

Crown: Whether complete hemisphere, dished partial spherical, or flat

yes

Material

S. M. steel

Tensile strength

34-41 kg/cm<sup>2</sup>

Thickness

15 mm.

Radius

1530 x 200 mm.

Working pressure by rules

7.16 kg/cm<sup>2</sup>

Description of Furnace: Plain, spherical, or dished crown

✓

Material

✓

Tensile strength

✓

Thickness

✓

External diameter

top...  
bottom... ✓

Length as per rule

✓

Working pressure by rules

✓

No. of support stays circumferentially

✓

and vertically

✓

Are stays fitted with nuts or riveted over

✓

Pitch of stays over thread

✓

Radius of spherical or dished furnace crown

✓

Working pressure by rule

✓

Thickness of Ogee Ring

✓

Diameter as per rule

D...  
d... ✓

Working pressure by rule

✓

Combustion Chamber

Material S. M. steel

Tensile strength

34-41 kg/cm<sup>2</sup>

Thickness of top plate

17 mm.

Radius if dished

200 mm. 1350 mm

Working pressure by rules

8.38 x 8.81 kg/cm<sup>2</sup>

Thickness of back plate

17 mm.

Diameter if circular

1500 mm.

Pitch as per rule

✓

Pitch of stays

500 mm.

Are stays fitted with nuts or riveted over

nuts &amp; washers

Pitch of stays over thread

42 mm.

Working pressure of back plate by rules

10 kg/cm<sup>2</sup>

Plates: Material

front...  
back... S. M. steel

Tensile strength

34-41 kg/cm<sup>2</sup>

Thickness

20 mm.

Mean pitch of stay tubes in nests

305 mm.

Comprising shell, Dia. as per rule

front...  
back... ✓

Pitch in outer vertical rows

✓

Dia. of tube holes FRONT

stay 26 mm.  
plain 72 "

BACK

stay 69 mm.  
plain 70 "

Each alternate tube in outer vertical rows a stay tube

no

Working pressure by rules

front 9.65 kg/cm<sup>2</sup>  
back

Boilers to combustion chamber tops: Material

✓

Tensile strength

✓

Length and thickness of girder at centre

✓

Length as per rule

✓

Pitch apart

✓

No. and pitch of stays in each

✓

Working pressure by rule

✓

Lloyd's Register

005695-005708-0158



Crown stays: Material ✓ Tensile strength ✓ Diameter ✓ { at body of stay, or over threads. ✓

No. of threads per inch ✓ Area supported by each stay ✓ Working pressure by rules ✓

Screw stays: Material S. M. steel Tensile strength 34-41 kg/cm<sup>2</sup> Diameter ✓ { at turned off part, or over threads. 55 mm. 68 u. No. of threads per inch 10

Area supported by each stay ✓ Working pressure by rules ✓ Are the stays drilled at the outer ends ✓

Tubes: Material S. M. steel External diameter ✓ { plain 70 mm. stay 70 u. Thickness ✓ { 4 mm. 8 u.

No. of threads per inch 10 Pitch of tubes 94 mm. Working pressure by rules 11.35 kg/cm<sup>2</sup>

Manhole Compensation: Size of opening in shell plate 417 x 547 mm. Section of compensating ring 765 x 635 x 20 mm. No. of rivets and di ATI

of rivet holes 44-20 mm. Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 100 mm.

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 Schiff- und Maschinenbau Aktiengesellschaft  
Werk: Act. Ges. "Weser" Manufac. Weser

Dates of Survey { During progress of work in shops - 1926: 7/9. 11/10. 22/11. 29/11. Is the approved plan of boiler forwarded herewith 26. 3. 27  
while building { During erection on board vessel - 1927: 16/5. 27/5. 2/6. 3/6 (If not state date of approval.)  
Total No. of visits 8

# GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This vertical Port boiler has been constructed under Special Survey in accordance with the approved plan and instructions and in conformity with the Rules. The materials used in the construction and the workmanship are good. The welding of the furnace and combustion chamber has been satisfactorily carried out by experienced workmen and the structure has been annealed subregimentally.

In my opinion this boiler is eligible to be classed in the Register Book with record of 71 lb.

Thickness of adjusting washers of safety valves, port: 16.8 mm Starboard: 12.7 mm.

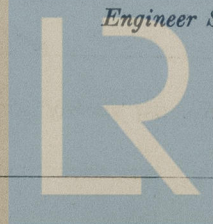
Survey Fee ... £ 4 : 4 : } When applied for, 5th June 1927  
Travelling Expenses (if any) £ : : } When received, 30/6/27

G. H. C. Ham

Committee's Minute FRI. 24 JUN 1927

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation