

## REPORT ON BOILERS.

No. 975.

23 JUL 1927

Received at London Office

Port of Bremen

Date of writing Report 18th July 1927 When handed in at Local Office

10

No. in  
g. Book

Survey held at

Date, First Survey 7th Sept. 1926

Last Survey 12th July 1927

(Number of Visits

7

Gross 6358

Tons

Net 3637

on the STEELSC "ADRIA"

Built at

Krumm

By whom built

Deutsche Schiff- u. Maschinenbau A.G.  
Werk Act. G.m. Hagen

Yard No. 864

When built 1927

Engines made at

- 11 -

By whom made

- 11 -

- 11 -

Engine No. 1499

When made 1927

Boilers made at

- 11 -

By whom made

- 11 -

- 11 -

Boiler No. 1186

When made 1926/27

Owners

Krumm Öl-Transport G.m. b.H.

Port belonging to

Bremen

## VERTICAL DONKEY BOILER

Made at

Krumm

By whom made

Deutsche Schiff- u. Maschinenbau A.G.  
Werk Act. G.m. Hagen

Boiler No. 1186

When made 1926/27

Where fixed

foremast of motor ship

Manufacturers of Steel

Mannmannrohr-Werk, Akt. Schlegel-Knaack, Hüttingen

Total Heating Surface of Boiler

23.5 sq. meters

Is forced draught fitted

Coal or Oil fired

oil fired

Type 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

29th November 1926

No. of Certificate

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 spring loaded

Area of each set of valves per boiler

per rule 2867 mm<sup>2</sup>  
as fitted 2 x 1963.5 mm

Pressure to which they are adjusted

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

Are they fitted with easing gear

yes

State whether steam from

donkey boilers can enter the donkey boiler

no

Smallest distance between boiler or uptake and bunkers

Woodwork

680 mm

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

yes

Largest internal dia. of boiler

1700 mm

Height

3770 mm

Shell plates: Material

S. M. Steel

Tensile strength

34-41 Kgr/mm<sup>2</sup>

Thickness

12 mm

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end single  
inter.

long. seams

double

Dia. of rivet holes in

circ. seams 23 mm  
long. seams

Pitch of rivets

59 mm  
73 mm

Percentage of strength of circ. seams

plate 610%  
rivets 50%

of Longitudinal joint

plate 68.5%  
rivets 81%  
combined

Working pressure of shell by rules

7.45 Kgr/cm<sup>2</sup>

Thickness of butt straps

outer 15 mm  
inner

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

yes

Material

S. M. Steel

Tensile strength

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

Thickness

15 mm

Radius

1530 x 200 mm

Working pressure by rules

7.16 Kgr/cm<sup>2</sup>

Description of Furnace: Plain, spherical, or dished crown

yes

Material

yes

Tensile strength

yes

Thickness

yes

External diameter

top  
bottom

Length as per rule

yes

Working pressure by rules

yes

Pitch of support stays circumferentially

yes

and vertically

yes

Are stays fitted with nuts or riveted over

yes

Diameter of stays over thread

yes

Radius of spherical or dished furnace crown

yes

Working pressure by rule

yes

Thickness of Ogee Ring

yes

Diameter as per rule

D  
d

Working pressure by rule

yes

Combustion Chamber

Material S. M. Steel

Tensile strength

34-41 Kgr/mm<sup>2</sup>

Thickness of top plate

17 mm

Radius if dished

200 mm

Working pressure by rules

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

Thickness of back plate

17 mm

Diameter if circular

25 mm

Length as per rule

yes

Pitch of stays

500 mm

Are stays fitted with nuts or riveted over

yes

Diameter of stays over thread

42 mm

Working pressure of back plate by rules

10 Kgr/cm<sup>2</sup>

Tube Plates: Material

front S. M. Steel  
back

Tensile strength

34-41 Kgr/mm<sup>2</sup>

Thickness

20 mm

Mean pitch of stay tubes in nests

305 mm

If comprising shell, Dia. as per rule

front  
back

Pitch in outer vertical rows

76 mm  
72 mm

Dia. of tube holes FRONT

stay  
plain

BACK

stay 69.5 mm  
plain 70.0 mm

Is each alternate tube in outer vertical rows a stay tube

no

Working pressure by rules

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

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

007412 - 007421 - 0102

© 2020

Lloyd's Register  
Foundation



50 975

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 Kgr./mm<sup>2</sup>* Diameter { at turned off part, *55 mm.* or over threads *68 -* No. of threads per inch *10*

Area supported by each stay ☒ Working pressure by rules ☒ Are the stays drilled at the outer ends *yes* ☒

Tubes: Material *S. M. steel* ☒ External diameter { plain *20 mm.* stay *70 "* Thickness { *4 mm.* *8 mm.*

No. of threads per inch *10* ☒ Pitch of tubes *94 mm.* ☒ Working pressure by rules *11.35 Kgr./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 dia 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  
*Wolke* *H. H. H. H. H.* Manufact

Dates of Survey { During progress of *1926: - 7/9, 14/10, 20/11, 29/11* Is the approved plan of boiler forwarded herewith *26.3.26* (If not state date of approval.)  
while building { During erection on *1927: - 28/6, 4/7, 12/7.* Total No. of visits *7*  
board vessel - - -

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

This vertical Downy 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 subsequently.

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

Thickness of adjusting washers: - port. 17 mm starboard. 13 mm.

Survey Fee ... £ 4 : 4 : } When applied for, *19.7.27* *MS*  
Travelling Expenses (if any) £ : : } When received, *1.9.27* *MS*  
*J. H. C. Rams*

Committee's Minute *FRI. 29 JUL 1927*  
Assigned *See P. 8 rpt. attached*