

REPORT ON BOILERS.

No. 19852

Received at London Office

24 APR 1931

Date of writing Report 10-4-31

When handed in at Local Office

19

Port of HAMBURG

Survey held at Hamburg

Date, First Survey 7-11-30

Last Survey 26-3-31

19

on the steel & NORDEN

(Number of Visits 9)

Gross 8440

Net 5286.59

built at Hamburg

By whom built Deutsche Werft A.G.

Yard No. 144

When built 1931

engines made at Augsburg

By whom made Maschf. Augsburg-Nürnberg A.G.

Engine No. 330440

When made 1931

boilers made at Hamburg

By whom made Deutsche Werft A.G.

Boiler No. 428

When made 1931

owners Skibs A/S Norden, H. Kuhnle

Port belonging to Bergen

VERTICAL DONKEY BOILER.

made at Hamburg By whom made Deutsche Werft A.G. Boiler No. 428

When made 1931 Where fixed aft main engine room

manufacturers of Steel Gutehoffnungshütte, Oberhausen

total Heating Surface of Boiler 10 m²

Is forced draught fitted yes

Coal or Oil fired oil

and Description of Boilers 1 vertical multitubular Donkey Boiler

Working pressure 100 lb

tested by hydraulic pressure to 200 lb

Date of test 26th January, 1931

No. of Certificate 532

area of Firegrate in each Boiler oil fired No. and Description of safety valves to each boiler 1, two springs loaded

area of each set of valves per boiler { per rule 920 mm² as fitted 2514 mm² Pressure to which they are adjusted 100 lb

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

woodwork

Is oil fuel carried in the double bottom under boiler

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated

Largest internal dia. of boiler 1100 mm Height 1825 mm

all plates: Material O.H. Steel

Tensile strength 44-50 kg/mm²

Thickness 9 mm

the shell plates welded or flanged flanged

Description of riveting: circ. seams

long. seams lap joint, double

a. of rivet holes in { circ. seams 20 mm long. seams 20 mm

Pitch of rivets 48.3 mm 61- mm

Percentage of strength of circ. seams { plate 53.8 rivets 59.2

of Longitudinal joint { plate 61.2 rivets 94 combined 81.2

working pressure of shell by rules 9.75 kg/cm²

Thickness of butt straps { outer inner

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

Material O.H. Steel

tensile strength 41-47 kg/mm²

Thickness 12 mm

Radius 1100 mm

Working pressure by rules 8.9 kg/cm²

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

Material O.H. Steel

Tensile strength 41-47 kg/mm²

thickness 15 mm

External diameter { top 800 mm bottom 900 mm

Length as per rule 900 mm

Working pressure by rules 11- kg/cm²

Sh of support stays circumferentially none fitted and vertically

Are stays fitted with nuts or riveted over

meter of stays over thread

Radius of spherical or dished furnace crown 1100 mm

Working pressure by rule 8- kg/cm²

thickness of Ogee Ring none

Diameter as per rule

Working pressure by rule

combustion Chamber: Material O.H. Steel

Tensile strength 41-47 kg/mm²

Thickness of top plate 15 mm

if dished 1100 mm

Working pressure by rule 8- kg/cm²

Thickness of back plate

Diameter if circular

length as per rule

Pitch of stays

Are stays fitted with nuts or riveted over

meter of stays over thread

Working pressure of back plate by rules

Plates: Material { front O.H. back Steel

Tensile strength { 41-47 kg/mm² 41-47 kg/mm²

Thickness { 18 mm 18 mm

Mean pitch of stay tubes in nests none fitted

comprising shell, Dia. as per rule { front 660 mm back 660 mm

Pitch in outer vertical rows 89 mm

Dia. of tube holes FRONT

stay 70 mm plain 64 mm

BACK stay 64 mm plain 64 mm

each alternate tube in outer vertical rows a stay tube no

Working pressure by rules

front 11.9 kg/cm² back 11.2 kg/cm²

ers to combustion chamber tops: Material none

Tensile strength

h and thickness of girder at centre

Length as per rule

nce apart

No. and pitch of stays in each

Working pressure by rule

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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 ☒ Tensile strength ☒ Diameter ☒ at turned off part, ☒ or over threads. ☒ No. of threads per inch ☒

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

Tubes: Material O.H. Steel, solid drawn External diameter ☒ plain 63.5 mm Thickness ☒ 3 mm stay 63.5 mm 8 mm

No. of threads per inch 9 Pitch of tubes 89 mm Working pressure by rules 9 kg/cm²

Manhole Compensation: Size of opening in shell plate 280 x 380 mm Section of compensating ring 140 x 9 mm No. of rivets and diameter of rivet holes 28, ϕ 20 mm Outer row rivet pitch at ends 125 mm 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 22 inclusive for boilers been complied with yes

**DEUTSCHE WERFT
AKTIENGESELLSCHAFT**

W. H. H. H.

The foregoing is a correct description,

Manufacturer.

Dates of Survey ☒ During progress of work in shops - 1930: Nov: - 7, 18, 1931: Jan: - 22, 26, Feb: - 18 Is the approved plan of boiler forwarded herewith 7-4-30
☒ while building ☒ During erection on board vessel - 1931, March: - 5-19-24-26 (If not state date of approval.)

Total No. of visits 9

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

This vertical Donkey Boiler has been constructed under Special Survey in accordance with the Society's Rules and the approved plans and instructions thereto. The materials used in the construction and the workmanship are of good quality. The boiler has been tested under hydraulic pressure of 200 lb with satisfactory result. Under steam it was found tight and the safety valves have been adjusted to 100 lb. pressure. Distance of washers of safety valves: - Port Starb.
12.5 mm 12.5 mm

In my opinion this Boiler is eligible to be classed in the Society's Reg. Book with notation of "100 lb."

The approved plan, which has been approved for the Vard's No 142, "KOLL", will be transmitted after completion of the Vard's No 143.

Survey Fee £ 4 : 4 - When applied for, 20.4.31
Travelling Expenses (if any) £ : When received, 21.5.1931

Committee's Minute FRL 1 MAY 1931
Assigned See F. B. Rep.

J. G. Wright
Engineer Surveyor to Lloyd's Register of Shipping.