

REPORT ON BOILERS.

No. 21263

Received at London Office 31 AUG 1934

Date of writing Report 20/8 1934 When handed in at Local Office

10 Port of Hamburg

No. in Survey held at Hamburg
Reg. Book

Date, First Survey 6/8/34

Last Survey 15/8/34 19

77617 on the Steel Ser. "Pine Court" ex Henry Horn

(Number of Visits 3) Gross 3219
Tons Net 1934

Built at Kiel

By whom built Fried. Krupp Germaniawerft A.G. Yard No. 462 When built 1924

Engines made at Kiel

By whom made — ditto —

Engine No. 1756 When made 1924

Boilers made at Kiel

By whom made — ditto —

Boiler No. 3608 When made 1924

Owners Knoll Line

Port belonging to London.

VERTICAL DONKEY BOILER.

Made at Kiel By whom made Fried. Krupp Germaniawerft. Boiler No. 3608 When made 1924 Where fixed Eng. Room. St. B.

Manufacturers of Steel Witkowitz Bergbau & Eisenhütten-Gewerkschaft, Witkowitz

Total Heating Surface of Boiler 30 m² ✓

Is forced draught fitted yes

Oil fired & exhaust gas

No. and Description of Boilers 1 vertical Donkey Boiler

Working pressure 7016 71 lb.

Tested by hydraulic pressure to ✓

Date of test ✓

No. of Certificate ✓

Area of Firegrate in each Boiler ✓

No. and Description of safety valves to each boiler 2 springs loaded

Area of each set of valves per boiler { per rule 3665 mm² ✓
as fitted 3920 mm² }

Pressure to which they are adjusted 7016

Are they fitted with easing gear yes

State whether steam from main boilers can enter the donkey boiler ✓

Smallest distance between boiler or uptake and bunkers

or woodwork ✓

Is oil fuel carried in the double bottom under boiler no

Smallest distance between base of boiler and tank top plating

1 m ✓

Is the base of the boiler insulated no

Largest internal dia. of boiler 1500 mm

Height 3418 mm

Shell plates: Material Siemens Martin Steel

Tensile strength 44 ÷ 50 kg/mm²

Thickness 12. - mm

Are the shell plates welded or flanged flanged no

Description of riveting: circ. seams

lap joint SR

long. seams lap joint DR

Dia. of rivet holes in { circ. seams 24-22 mm
long. seams 22 mm }

Pitch of rivets 61-75 mm

75 mm

Percentage of strength of circ. seams

plate 68.5 70.5
rivets 46.2 63.5

of Longitudinal joint

plate 70.5
rivets 63.5

combined 75.5

Working pressure of shell by rules 9.45 kg/cm²

Thickness of butt straps

outer ✓
inner ✓

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

Material S. M. Steel

Tensile strength 34 ÷ 41 kg/mm² ✓

Thickness 16 mm ✓

Radius 1800 mm ✓

Working pressure by rules 6.52 kg/cm²

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

Material S. M. Steel

Tensile strength 34 ÷ 41 kg/mm²

Thickness 14 mm ✓

External diameter { top 1198 ✓
bottom 1328 ✓ }

Length as per rule 1765 mm

Working pressure by rules 6.05 kg/cm²

Pitch of support stays circumferentially 300 mm ✓

and vertically 320 mm ✓

Are stays fitted with nuts or riveted over riveted over

Diameter of stays over thread 37.9 mm ✓

Radius of spherical or dished furnace crown 1100 mm ✓

Working pressure by rule 8.1 kg/cm²

Thickness of Ogee Ring 14. - mm ✓

Diameter as per rule

D 1500 mm
d 1325 mmWorking pressure by rule 6.8 kg/cm²

Combustion Chamber: Material

Tensile strength

Thickness of top plate

Radius if dished

Working pressure by rule

Thickness of back plate

Diameter if circular

Length as per rule

Pitch of stays

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Working pressure of back plate by rules

Tube Plates: Material { front S. M. ✓
back Steel }Tensile strength 34 ÷ 41 kg/mm² ✓

Thickness 18 mm ✓

Mean pitch of stay tubes in nests 270 x 300 mm

Comprising shell, Dia. as per rule { front ✓
back ✓ }

Pitch of stay tubes 300 mm

Pitch in outer vertical rows 300 mm

Dia. of tube holes FRONT

stay 65.72 mm
plain 63.5 mm

BACK

stay 59.61 mm
plain 63.5 mm

Each alternate tube in outer vertical rows a stay tube no!

Working pressure by rules

front 8.15 kg/cm²
back 8.9 kg/cm²

Risers to combustion chamber tops: Material none ✓

Tensile strength

Diameter and thickness of girder at centre ✓

Length as per rule ✓

Distance apart ✓

No. and pitch of stays in each ✓

Working pressure by rule ✓

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Crown stays: Material none 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/mm² Diameter { at turned off part, 34.29 mm or over threads, 37.9 mm No. of threads per inch 9

Area supported by each stay 96,000 mm² Working pressure by rules 6.6 kg/mm² Are the stays drilled at the outer ends no

Tubes: Material S.M. Steel, seamless drawn External diameter { plain 63.5 mm stay 60 mm Thickness { 3 mm 6 mm

No. of threads per inch 9 Pitch of tubes maximum 90 x 120 Working pressure by rules 9 kg/mm²

Manhole Compensation: Size of opening in shell plate _____ Section of compensating ring _____ No. of rivets and diameter _____

of rivet holes _____ Outer row rivet pitch at ends _____ 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 _____

The foregoing is a correct description, _____

Manufacturer. _____

Dates of Survey { During progress of work in shops - - - } Is the approved plan of boiler forwarded herewith (If not state date of approval.) _____

while building { During erection on board vessel - - - } Total No. of visits 3

6-8-13-15 August, 1934

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

Workmanship and material of this Donkey Boiler are of good quality. The scantlings were found to be in conformity with the submitted plans and all parts were found in good and satisfactory condition. Under steam the boiler was found tight and its safety valves have been adjusted to 70 lb pressure. In my opinion it is eligible to be placed in the Society's Reg. Book with notation of

DB - 70 lb.

Adjusting weights of safety valves: F 9 - mm
A 10 - mm

Survey Fee ... £ : : When applied for. 10

Travelling Expenses (if any) £ : : When received. 19

Committee's Minute FRI. 14 SEP 1934

Assigned See F.C. Rep.

J.A. Mitchell
Engineer Surveyor to Lloyd's Register of Shipping.

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