

REPORT ON BOILERS.

No. 21285

21 SEP 1934

Received at London Office

Date of writing Report 9/9/34 19 34 When handed in at Local Office 10 Port of Hamburg

No. in Survey held at Hamburg Date, First Survey 29/8/34 Last Survey 5/9/34 19 34
Reg. Book 74436 on the Steel Ss. HINDHEAD ex Consul Horn (Number of Visits 2)

Gross 3219
Tons Not 1932

Built at Kiel By whom built Fried. Krupp Germaniawerft Yard No. 455 When built 1924
Engines made at Kiel By whom made ditto Engine No. 2640 When made 1924
Boilers made at Kiel By whom made ditto Boiler No. 3607 When made 1924
Owners Knoll Line Port belonging to London

VERTICAL DONKEY BOILER.

Made at Kiel By whom made Fried. Krupp Germaniawerft Boiler No. 3607 When made 1924 Where fixed Engine room S.B.

Manufacturers of Steel Witkowitz Bergbau- und Eisenhütten-gewerkschaft, Witkowitz

Total Heating Surface of Boiler 30 m² Is forced draught fitted yes Coal or Oil fired exhaust gas

No. and Description of Boilers 1 vertical Donkey Boiler Working pressure 70 lb 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 of 50 mm φ, 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 70 lb 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 S.M. Steel Tensile strength 44 ÷ 50 kg/mm² Thickness 12 mm

Are the shell plates welded or flanged flanged Description of riveting: circ. seams { lap joint SR
butt DR long. seams lap joint DR ✓

Dia. of rivet holes in { circ. seams 22-22 mm ✓
long. seams 22 mm Pitch of rivets { 61-75 mm ✓
75 mm Percentage of strength of circ. seams { plate 60.5-70.5 ✓
rivets 63-63 of longitudinal joint { rivets 63-
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 mm ✓
bottom 1328 mm Length as per rule 1765 mm Working pressure by rules 6.05 kg/cm²

Pitch of support stays circumferentially 300 mm ✓ and vertically 390 mm ✓ Are stays fitted with nuts or riveted over riveted

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 1328 mm Working 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. Tensile strength { 34-41 kg/mm² ✓
back Steel Thickness { 12 mm ✓
18 mm Mean pitch of stay tubes in nests 270 x 300 mm

If comprising shell, Dia. as per rule { front _____
back _____ Pitch in outer vertical rows { 300 mm ✓
300 mm Dia. of tube holes FRONT { stay 65.22 mm ✓
plain 63.5 mm BACK { stay 59.61 mm ✓
plain 63.5 mm

Is 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

Girders to combustion chamber tops: Material None Tensile strength _____

Depth 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 _____ Tensile strength _____ Diameter $\left\{ \begin{array}{l} \text{at body of stay,} \\ \text{or} \\ \text{over threads} \end{array} \right.$ _____

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 $\left\{ \begin{array}{l} \text{at turned off part, } 34.22 \text{ mm} \\ \text{or} \\ \text{over threads, } 37.9 \text{ mm} \end{array} \right.$ No. of threads per inch *9*

Area supported by each stay *96,000 mm²* Working pressure by rules *6.6 kg/cm²* Are the stays drilled at the outer ends *no*

Tubes: Material *S.M. Steel, seamless drawn* External diameter $\left\{ \begin{array}{l} \text{plain } 63.5 \text{ mm} \\ \text{stay } 60. - \text{ mm} \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 3. - \text{ mm} \\ 6. - \text{ mm} \end{array} \right.$

No. of threads per inch *9* Pitch of tubes *maximum 90 + 120 mm* Working pressure by rules *9. - kg/cm²*

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 *yes.*

The foregoing is a correct description.

Manufacturer.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops - -} \end{array} \right.$ Is the approved plan of boiler forwarded herewith
(If not state date of approval.)

while building $\left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel - -} \end{array} \right.$ *29/8/34, 5/9/34* Total No. of visits *2*

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

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

DB-7015.

Work on safety valves:-
Forw:- 12.5 mm Aft:- 11. mm.

Survey Fee ... £ + : :) When applied for, 10

Travelling Expenses (if any) £ + : :) When received, 18

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

Committee's Minute **TUE 25 SEP 1934**
Assigned *See J.C. Ref*

