

Rpt. 5a.

REPORT ON BOILERS.

No. 20216

25 OCT 1941

Received at London Office

Date of writing Report *9th Oct. 1941* When handed in at Local Office *10th Oct. 1941* Port of *Mahrro*

No. in Reg. Book *0.9* Survey held at *Mahrro* Date, First Survey *13th Nov. 1940* Last Survey *30th Sept. 1941*

on the *single screw motor tanker "Fahsturbahn"* (Number of Pivots *28*) Gross *10236* Tons Net *6183*

Master *Mahrro* Built at *Mahrro* By whom built *Kokkerns M. V. A. B.* Yard No. *227* When built *1941*

Engines made at *Mahrro* By whom made *Kokkerns M. V. A. B.* Engine No. *262* When made *1941*

Boilers made at *Mahrro* By whom made *Kokkerns M. V. A. B.* Boiler No. *970/21* When made *1941*

Nominal Horse Power *1556* Owners *Trallborgs Ingenjörbyrå M. V. A. B.* Port belonging to *Trallborg*

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Mahrro Vahkorne Minors Steel & Ironworks Corp. Vahkorne* (Letter for Record *S*)

Total Heating Surface of Boilers *2 x 150 = 300 m²* Is forced draught fitted *Yes* Coal or Oil fired *Oil*

No. and Description of Boilers *Two S.O.* Working Pressure *180 lb./sq. in.*

Tested by hydraulic pressure to *320 lb./sq. in.* Date of test *13.2.1941* No. of Certificate *96 & 97* Can each boiler be worked separately *Yes*

Area of Firegrate in each Boiler *✓* No. and Description of safety valves to each boiler *2 Direct spring loaded.*

Area of each set of valves per boiler *per Rule 6660 mm²* Pressure to which they are adjusted *85 lb./sq. in.* Are they fitted with easing gear *Yes*

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *✓*

Smallest distance between boilers or uptakes and bunkers or woodwork *in boilers placed on a platform in after end of eng. room.* Is oil fuel carried in the double bottom under boilers *✓*

Smallest distance between shell of boiler and tank top plating *✓* Is the bottom of the boiler insulated *Yes*

Largest internal dia. of boilers *2700 mm.* Length *2500 mm.* Shell plates: Material *Steel* Tensile strength *45.2-46.0 kg. mm²*

Thickness *26 mm.* Are the shell plates welded or flanged *No* Description of riveting: circ. seams *end* *✓* *inter* *✓*

Long. seams *S.O. S.O.S.* Diameter of rivet holes in *circ. seams 32 mm.* *long. seams 28.5 mm. 32 mm.* Pitch of rivets *104.4 mm.* *202 mm.*

Percentage of strength of circ. end seams *plate 69.2%* *rivets 47.1%* Percentage of strength of circ. intermediate seam *plate 84.1%* *rivets 95.2%* *combined 94.7%* Working pressure of shell by Rules *13.0 kg. mm²*

Thickness of butt straps *outer 20 mm.* *inner 22 mm.* No. and Description of Furnaces in each Boiler *Two corrugated.*

Material *Steel* Tensile strength *43.2-46.0 kg. mm²* Smallest outside diameter *1128 mm.*

Length of plain part *top 14 mm.* *bottom 14 mm.* Thickness of plates *14 mm.* Description of longitudinal joint *Welded.*

Dimensions of stiffening rings on furnace or c.c. bottom *✓* Working pressure of furnace by Rules *12.65 kg. mm²*

End plates in steam space: Material *Steel* Tensile strength *43.2-45.6 kg. mm²* Thickness *26 mm.* Pitch of stays *400 x 430 mm.*

On are stays secured *Stb. mnts and washers.* Working pressure by Rules *16.8 kg. mm²*

End plates: Material *front Steel* *back Steel* Tensile strength *43.2-43.7 kg. mm²* *45.4-46.7 kg. mm²* Thickness *26 mm.* *22 mm.*

Can pitch of stay tubes in nests *249 mm.* Pitch across wide water spaces *330 mm.* Working pressure *front 23.2 kg. mm²* *back 19.9 kg. mm²*

Orders to combustion chamber tops: Material *Steel* Tensile strength *46.5-46.7 kg. mm²* Depth and thickness of girder *215 mm.*

Centre *2-185 x 20 mm.* Length as per Rule *730.5 mm.* Distance apart *215 mm.* No. and pitch of stays *2-220 mm.*

Each *2-220 mm.* Working pressure by Rules *15.0 kg. mm²* Combustion chamber plates: Material *Steel*

Tensile strength *45.0-46.7 kg. mm²* Thickness *Sides 18.5 mm.* *Back 17.5 mm.* *Top 18.5 mm.* *Bottom 18.5 mm.*

Pitch of stays to ditto: *Sides 190 x 220 mm.* *Back 190 x 190 mm.* *Top 215 x 220 mm.* Are stays fitted with nuts or riveted over *Noth.*

Working pressure by Rules *12.65 kg. mm²* Front plate at bottom: Material *Steel* Tensile strength *43.2-43.7 kg. mm²*

Thickness *26 mm.* Lower back plate: Material *Steel* Tensile strength *43.2-45.6 kg. mm²* Thickness *26 mm.*

Pitch of stays at wide water space *190 x 330 mm.* Are stays fitted with nuts or riveted over *Nuts.*

Working Pressure *27.1 kg. mm²* Main stays: Material *Steel* Tensile strength *44 kg. mm²*

Diameter *At body of stay, 2 7/8"* *Over threads 2 1/8"* No. of threads per inch *6* Area supported by each stay *1700 mm²*

Working pressure by Rules *13.1 kg. mm²* Screw stays: Material *Steel* Tensile strength *44 kg. mm²*

At forward of port *1 3/8" - 1 3/4"* *9* *3610 mm²*

12.65 kg cm⁻² No 198 2 13/4"
No 49400 mm² Working pressure by Rules 139 kg cm⁻²
Material Steel External diameter: { Plate 2 1/2" Stay 2 1/2" Thickness 3.65 mm No. of threads per inch 9
Pitch of tubes 90 x 93 mm Working pressure by Rules 16 kg cm⁻² Manhole compensation: Size of opening in
Shell plate 416 x 516 mm Section of compensating ring 13247 mm² No. of rivets and diameter of rivet holes 42 - 38.5 mm
Outer row rivet pitch at ends 200 mm Depth of flange if manhole flanged 92 mm Steam Dome: Material
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets
External diameter Working pressure by Rules Thickness of crown No. and diameter of
ays Inner radius of crown Working pressure by Rules
Low connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch
Rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of { Tubes Steel forgings Steel castings
Number of elements Material of tubes Internal diameter and thickness of tubes
Material of headers Tensile strength Thickness Can the superheater be shut off and
be boiler be worked separately Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:
tubes forgings and castings and after assembly in place Are drain cocks or
valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,

Signature of Manufacturer

Dates of Survey { During progress of work in shops - - - 26.9.1940
while building { During erection on board vessel - - - 27.9.1940
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 26.9.1940
Total No. of visits 28

Is this Boiler a duplicate of a previous case If so, state Vessel's name and Report No.

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

Some working boilers have been built under special authority in accordance
with the Rules and approved plans.
The materials used have been tested as per Rules and the workmanship
is good.

Survey Fee ... £ 409.50 When applied for, 10th Oct. 1941
Travelling Expenses (if any) £ : When received, 30

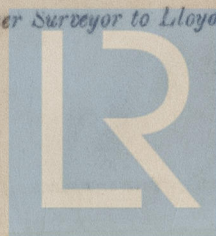
FRI. 7 NOV 1941

Committee's Minute

Assigned

See Memo. Rpt. 2026

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register
Foundation