

REPORT ON BOILERS.

No. 2081.

Received at London Office

10 SEP 1941

Date of writing Report 7th June, 1941. When handed in at Local Office 10th June, 1941. Port of Malmö.

No. in Survey held at Malmö Date, First Survey 26th July, 1940 Last Survey 17th Jan. 1941.

Reg. Book. ✓ on the Single Funnel Motor Tanker "MALMÖHUS" (Number of Visits 26. Tons { Gross 10232 Net 6185.

Master Built at Malmö By whom built Hockmors M. V. A. B. Yard No. 226 When built 1941.

Engines made at Malmö By whom made Hockmors M. V. A. B. Engine No. 259 When made 1941.

Boilers made at Malmö By whom made Hockmors M. V. A. B. Boiler No. 984/5 When made 1941.

Nominal Horse Power 1556 Owners Tralleborgs Ängf. Nya Aktieab. Port belonging to Tralleborg.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Malmö. Vitkovice Minus Steel & Ironworks Corp. Vitkovice Letter for Record S.

Total Heating Surface of Boilers $2 \times 150 = 300 \text{ m}^2$ Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers Two S.B. Working Pressure 180 lbs./sq. in.

Tested by hydraulic pressure to 320 lbs. Date of test 7-10-1940 No. of Certificate 92 & 93 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 Not adjusted Are they fitted with easing gear Yes.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓ The boilers placed on a platform in after end of

Smallest distance between boilers or uptakes and bulkheads or woodwork engine 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 3700 mm. Length extra 3500 mm. Shell plates: Material Steel Tensile strength 46.3-49.0 kg. mm².

Thickness 26 mm. Are the shell plates welded or flanged No Description of riveting: circ. seams { end 104.4 mm. inter. 202 mm.

long. seams T.R. D.B.S. Diameter of rivet holes in { circ. seams 32 mm. long. seams 28.5 & 32 mm. Pitch of rivets { 104.4 mm. 202 mm.

Percentage of strength of circ. end seams { plate 69.2% rivets 46.1% Percentage of strength of circ. intermediate seam { plate 84.1% rivets 93.2% combined 94.1%

Percentage of strength of longitudinal joint { plate 84.1% rivets 93.2% combined 94.1% Working pressure of shell by Rules 13.3 kg. cm².

Thickness of butt straps { outer 20 mm. inner 23 mm. No. and Description of Furnaces in each Boiler Two corrugated.

Material Steel Tensile strength 49.2-46.0 kg. mm² Smallest outside diameter 1128 mm.

Length of plain part { top 12 mm. bottom 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. cm².

End plates in steam space: Material Steel Tensile strength 42.7-46.1 kg. mm² Thickness 26 mm. Pitch of stays 400 x 430 mm.

How are stays secured Dbl. nuts and washers. Working pressure by Rules 16.8 kg. cm².

Tube plates: Material { front Steel Tensile strength 42.7-46.1 kg. mm² Thickness 26 mm. back Steel Tensile strength 42.7-45.1 kg. mm² Thickness 22 mm.

Mean pitch of stay tubes in nests 249 mm. Pitch across wide water spaces 330 mm. Working pressure { front 23.2 kg. cm² back 19.9 kg. cm².

Girders to combustion chamber tops: Material Steel Tensile strength 49.2-49.3 kg. mm² Depth and thickness of girder

at centre 2 (185 x 20) mm. Length as per Rule 730.5 mm. Distance apart 215 mm. No. and pitch of stays

in each 2-220 mm. Working pressure by Rules 15.8 kg. cm² Combustion chamber plates: Material Steel

Tensile strength 42.9-46.6 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 No.

Working pressure by Rules 13.5 kg. cm² Front plate at bottom: Material Steel Tensile strength 42.7-46.1 kg. mm².

Thickness 26 mm. Lower back plate: Material Steel Tensile strength 42.7-45.1 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. cm² Main stays: Material Steel Tensile strength 44 kg. mm².

Diameter { At body of stay, 2 7/8" - 2 7/8" No. of threads per inch 6 Area supported by each stay 172000 mm².

Working pressure by Rules 13.1 kg. cm² Screw stays: Material Steel Tensile strength 44 kg. mm².

Diameter { At turned off part, 1 3/8" - 1 3/4" No. of threads per inch 9 Area supported by each stay 36100 mm².

Working pressure by Rules 12.65 kg. cm^2 Are the stays drilled at the outer ends ☒ No Margin stays: Diameter { At turned off part, or Over threads $1\frac{1}{8}" \text{ & } 1\frac{3}{4}"$

No. of threads per inch 9 Area supported by each stay 49400 mm^2 Working pressure by Rules 13.9 kg. cm^2

Tubes: Material Steel External diameter { Plain $2\frac{1}{2}"$ Stay $2\frac{1}{2}"$ Thickness { 3.65 mm. $8 \text{ & } 9.5 \text{ mm.}$ No. of threads per inch 9

Pitch of tubes $90 \text{ & } 93 \text{ mm.}$ Working pressure by Rules 16 kg. cm^2 Manhole compensation: Size of opening in shell plate $416 \times 516 \text{ mm.}$ Section of compensating ring 16750 mm^2 No. of rivets and diameter of rivet holes $48 - 28.5 \text{ mm.}$

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 ☒

Internal diameter ☒ Working pressure by Rules ☒ Thickness of crown ☒ No. and diameter of stays ☒

How connected to shell ☒ Inner radius of crown ☒ Working pressure by Rules ☒

Size of doubling plate under dome ☒ Diameter of rivet holes and pitch of 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 the 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,

Dates of Survey { During progress of work in shops - - - } $26/7, 2/8, 9/8, 10/8, 17/8, 16/8, 14/8, 27/8, 31/8, 4/9, 9/9, 11/9, 16/9, 21/9, 24/9, 2/10, 7/10, 22/10, 19/10$

while building { During erection on board vessel - - - } $6/11, 22/11, 27/11, 27/11, 2/12, 9/12, 10/12, 19/12, 17/1, 19/1$

Are the approved plans of boiler and superheater forwarded herewith $26.9.1939$ (If not state date of approval.)

Total No. of visits 26

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.)

These donkey boilers have been built under special survey in accordance with the Rules and the approved plan.

The materials used in the construction have been tested as per Rule and the workmanship is good.

To complete donkey boiler survey.

The safety valves of both donkey boilers to be adjusted under steam.

It cannot be stated when the survey will be completed.

Survey Fee ... $\text{\pounds} 409:50$ When applied for, 10^{th} June, 1941.

Travelling Expenses (if any) \pounds : : When received, 19

A. B. Boring.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 23 SEP 1941

Assigned

See Memo. Rpt. 2001



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