

REPORT ON BOILERS.

Received at London Office **9 APR 1954**

Date of writing Report 5/4 1954 • When handed in at Local Office 8/4 1954 • Port of M A L M Ö.

No. in Survey held at M A L M Ö. Date, First Survey 18/1 Last Survey 31/3 1954
Reg. Book. (Number of Visits 4)

6109s on the Motortanker "H A V J A R L" Tons Gross 11,079
Net 6,408

Master --- Built at Malmö. By whom built Kockums M.V. A.-B. Yard No. 366 When built 1954.

Engines made at Malmö. By whom made Kockums Mek. Verkstads A.-B. Engine No. 673 When made 1954.

Boilers made at Gothenburg. By whom made A.-B. Lindholmens Varv Boiler No. 3004/5 When made 1953.

Nominal Horse Power --- Owners A/S Havprins Port belonging to Oslo.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel --- (Letter for Record ---)

Total Heating Surface of Boilers --- Is forced draught fitted Yes. Coal or Oil fired Oil fired.

No. and Description of Boilers --- Working Pressure 150 lbs/sq"

Tested by hydraulic pressure to --- Date of test --- No. of Certificate --- 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 125.77 ✓ Pressure to which they are adjusted 150 lbs/sq" as fitted 157.00 mm. ✓ Are they fitted with easing gear Yes. ✓

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main boiler.

Smallest distance between boilers or uptakes and bunkers or woodwork --- Is oil fuel carried in the double bottom under boilers ---
Donkey boilers placed on a platform aft in E.R. Yes.

Smallest distance between shell of boiler and tank top plating --- Is the bottom of the boiler insulated ---

Largest internal dia. of boilers --- Length --- Shell plates: Material --- Tensile strength ---

Thickness --- Are the shell plates welded or flanged --- Description of riveting: circ. seams end
inter

long. seams --- Diameter of rivet holes in circ. seams Pitch of rivets ---
long. seams

Percentage of strength of circ. end seams plate Percentage of strength of circ. intermediate seam plate
rivets rivets

Percentage of strength of longitudinal joint plate Working pressure of shell by Rules ---
rivets combined

Thickness of butt straps outer No. and Description of Furnaces in each Boiler ---
inner

Material --- Tensile strength --- Smallest outside diameter ---

Length of plain part top Thickness of plates rown Description of longitudinal joint ---
bottom bottom

Dimensions of stiffening rings on furnace or c.c. bottom --- Working pressure of furnace by Rules ---

End plates in steam space: Material --- Tensile strength --- Thickness --- Pitch of stays ---

How are stays secured --- Working pressure by Rules ---

Tube plates: Material front Tensile strength --- Thickness ---
back

Mean pitch of stay tubes in nests --- Pitch across wide water spaces --- Working pressure front
back

Girders to combustion chamber tops: Material --- Tensile strength --- Depth and thickness of girder ---

at centre --- Length as per Rule --- Distance apart --- No. and pitch of stays ---

at in each --- Working pressure by Rules --- Combustion chamber plates: Material ---

Tensile strength --- Thickness: Sides --- Back --- Top --- Bottom ---

Pitch of stays to ditto: Sides --- Back --- Top --- Are stays fitted with nuts or riveted over ---

Working pressure by Rules --- Front plate at bottom: Material --- Tensile strength ---

Thickness --- Lower back plate: Material --- Tensile strength --- Thickness ---

Pitch of stays at wide water space --- Are stays fitted with nuts or riveted over ---

Working pressure --- Main stays: Material --- Tensile strength ---

Diameter At body of stay No. of threads per inch --- Area supported by each stay ---
or
Over threads

Working pressure by Rules --- Screw stays: Material --- Tensile strength ---

Diameter At turned off part No. of threads per inch --- Area supported by each stay ---
or
Over threads



Working pressure by Rules..... Are the stays drilled at the outer ends..... Margin stays: Diameter ^{At turned off part,} _{or} ^{Over threads}.....
 No. of threads per inch..... Area supported by each stay..... Working pressure by Rules.....
 Tubes: Material..... External diameter ^{Plain}..... Thickness ^{Stay}..... No. of threads per inch.....
 Pitch of tubes..... Working pressure by Rules..... Manhole compensation: Size of opening.....
 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..... 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.....
 stays..... Inner radius of crown..... Working pressure by Rules.....
 How connected to shell..... 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.....
 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.....
 Rules..... Pressure to which the safety valves are adjusted..... Hydraulic test pressure.....
 tubes..... forgings and castings..... and after assembly in place..... Are drain cocks.....
 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..... Yes.....

The foregoing is a correct description,

KOCKUMS
 MEKANISKA VERKSTADEN AKTIEBOLAG

P. Steenberg
 Manufacturer

Please see Gothenburg F.E. rpt. No. 20176
 Are the approved plans of boiler and superheater forwarded herewith..... No.....
 (If not state date of approval.)

Dates of Survey while building ^{During progress of work in shops - -}.....
^{During erection on board vessel - - -} 18th January - 31st March-54.....

Total No. of visits..... 4.....

Is this Boiler a duplicate of a previous case..... No..... 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 securely fitted in the vessel under my inspection and to my satisfaction and the safety valves adjusted under steam to 150 lbs/sq".
 The photostat copy of Gothenburg Report No. 20176 is returned herewith.

Survey Fee £ } When applied for.....19.....
 Travelling Expenses (if any) £ : : } When received.....19.....

P. Steenberg
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... TUESDAY 11 MAY 1954.....

Assigned..... *See Rpt. of 6.*.....



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