

REPORT ON BOILERS.

No. 1191.

ing Report 3rd April, 1933. When handed in at Local Office 5th April, 1933. Port of Malmö.
 Survey held at Malmö Date, First Survey 31st July, 1931 Last Survey 28th March, 1933.
 on the T.S. Motor Tanker "PROCYON" (Number of Visits 31.) Gross 8721.
 Tons Net 4954.
 Built at Malmö By whom built Kockums M. V. Aktiel. Yard No. 171 When built 1933.
 Made at Malmö By whom made Kockums M. V. Aktiel. Engine No. 75276 When made 1933.
 Made at Malmö By whom made Kockums M. V. Aktiel. Boiler No. 909/10 When made 1933.
 Horse Power 861 Owners Trelleborgs Ångf. Nya Aktiel. Port belonging to Trelleborg.

WATER TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Wilkowitzer Bergbau- und Eisenhütten Ges. (Letter for Record S.)
 Heating Surface of Boilers $2 \times 122 = 244 \text{ m}^2$ Is forced draught fitted Yes Coal or Oil fired Oil
 Description of Boilers Two S.B. Working Pressure 12 kg./cm²
 Hydraulic pressure to 306 lbs. Date of test 9-10-31 No. of Certificate 57 & 58 Can each boiler be worked separately Yes
 Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Two Direct Spring Loaded.
 Each set of valves per boiler per Rule 6871 mm² Pressure to which they are adjusted 175 lbs. Are they fitted with easing gear Yes
 For donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓
 Distance between boilers or uptakes and bunkers or woodwork O.F. SIDE 1400 mm. Is oil fuel carried in the DEEP TANK under boilers Yes
 Distance between shell of boiler and tank top plating DEEP 600 mm. Is the bottom of the boiler insulated Yes
 Internal dia. of boilers 3400 mm. Length Ext. 3400 mm. Shell plates: Material Steel Tensile strength 44-50 kg./mm²
 Thickness 22.5 mm. Are the shell plates welded or flanged No Description of riveting: circ. seams end DR.
 Rivets T.R. D.B.S. Diameter of rivet holes in circ. seams 26 mm. Pitch of rivets 83 mm.
 Percentage of strength of circ. end seams plate 68.6 % rivets 46.7 % Percentage of strength of circ. intermediate seam plate 86.3 %
 Percentage of strength of longitudinal joint rivets 86.2 % combined 89.8 % Working pressure of shell by Rules 12.14 kg./cm²
 Thickness of butt straps outer 17 mm. inner 20 " No. and Description of Furnaces in each Boiler Two, Corrugated.
 Material Steel Tensile strength 41.4 kg./mm² Smallest outside diameter 1076 mm.
 Thickness of plates 13 mm. Description of longitudinal joint Welded.
 Working pressure of furnace by Rules 13.5 kg./cm²
 Material Steel Tensile strength 41.7-45.2 kg./mm² Thickness 22 mm. Pitch of stays 350 x 406 mm.
 Working pressure by Rules 12.9 kg./cm²
 Material Steel Tensile strength 41.7-44 kg./mm² Thickness 22 mm.
 Working pressure by Rules 14.5 kg./cm²
 Material Steel Tensile strength 44-50 kg./mm² Depth and thickness of girder 21 mm.
 Length as per Rule 735 mm. Distance apart 210 mm. No. and pitch of stays 2-228
 Working pressure by Rules 15.6 kg./cm² Combustion chamber plates: Material Steel
 Thickness: Sides 17.5 mm. Back 18 mm. Top 17.5 mm. Bottom 17.5 mm.
 Are stays fitted with nuts or riveted over Both.
 Front plate at bottom: Material Steel Tensile strength 41.7-44 kg./mm²
 Lower back plate: Material Steel Tensile strength 43.1-45.2 kg./mm² Thickness 22 mm.
 Are stays fitted with nuts or riveted over Margin stays with nuts.
 Main stays: Material Steel Tensile strength 46.6-46.8 kg./mm²
 No. of threads per inch 6 Area supported by each stay 142100 mm²
 At body of stay, 2 3/8 " x 3" (Low) No. of threads per inch 9 Area supported by each stay 43320 mm²
 At turned off part, 34 x 37 mm.

Working pressure by Rules 13.1 kg./cm^2 Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part, *34 & 3*
No. of threads per inch *9* Area supported by each stay 57560 mm^2 Working pressure by Rules 12.1 kg./cm^2
Tubes: Material *Steel* External diameter { Plain $2\frac{1}{2}"$ Thickness 3.25 mm No. of threads per inch *9*
Pitch of tubes $89 \times 92 \text{ mm}$ Working pressure by Rules *P. 12.5 and S. 15 kg./cm}^2* Manhole compensation: Size of
shell plate $400 \times 500 \text{ mm}$ Section of compensating ring $12000 \text{ mm}^2 \times 25$ No. of rivets and diameter of rivet holes *44-26*
Outer row rivet pitch at ends 190 mm Depth of flange if manhole flanged 95 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
Internal diameter Working pressure by Rules Thickness of crown No. and
stays Inner radius of crown Working pressure by Rules
How connected to shell Size of doubling plate under dome Diameter of rivet holes
of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of { Tubes
Number of elements Material of tubes Steel castings Internal diameter and thickness of tubes
Material of headers Tensile strength Thickness Can the superheater be
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
Rules Pressure to which the safety valves are adjusted Hydraulic test
tubes, castings and after assembly in place Are drain cocks or
to free the superheater from water where necessary

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

The foregoing is a correct description

KOCKUMS MEKANISKA VERKSTAD
ARTIE-BOLAG

Dates of Survey { During progress of work in shops - *31/7, 3/8, 5/8, 13/8, 17/8, 19/8, 21/8, 24/8, 25/8, 27/8, 29/8, 31/8,*
while building { During erection on board vessel - *8/10, 9/10, 13/10, 19/10, 19/11, 1/12, 17/12-1931, 24/1, 27/1-1933.* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits *31.*

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 approved plans.

The materials used in the construction has been tested as per Rules and the workmanship is good.

Survey Fee *See Rpt. 4th* : *✓* : When applied for, *✓* 192
Travelling Expenses (if any) £ : : When received, 192

A. Lundén
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *WED. 19 APR 1933*

Assigned *See 7. E. Rpt.*



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Foundation