

4mb

REPORT ON BOILERS.

No. 1421.

Received at London Office 10 JAN 1936

Report of writing Report 4th Jan, 1936 When handed in at Local Office 8th Jan, 1936 Port of Mahrö

No. in Survey held at Mahrö Date, First Survey 7th May, 1936 Last Survey 2nd January 1936

Book Amppel (Number of Visits 29) Gross 8064

508 on the Single screw Motor Tanker "ORION" Tons Net 4751

ster Built at Mahrö By whom built Kockmans M. V. M. Ward No. 184 When built 1936

ines made at Mahrö By whom made Kockmans M. V. M. Engine No. 110 When made 1936

lers made at Mahrö By whom made Kockmans M. V. M. Boiler No. 929/30 When made 1936

imal Horse Power 1167 Owners Smiths Lörrensens Tankrederi AS Port belonging to Armedal

ULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs The Steel Company of Scotland, Limited (Letter for Record S.)

al Heating Surface of Boilers 2 x 122 = 244 m² Is forced draught fitted Yes Coal or Oil fired Oil

and Description of Boilers Two S.B. Working Pressure 12 kg. cm²

ted by hydraulic pressure to 306 lbs. Date of test 20-9-1935 No. of Certificate 66 267 Can each boiler be worked separately Yes

a of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Two direct spring loaded

a of 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

ase of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

allest distance between boilers OF SIDE 1050 mm Is oil fuel carried in the DEEP TANK under boilers Yes

allest distance between shell of boiler and tank top plating DEEP 540 mm Is the bottom of the boiler insulated Yes

gest internal dia. of boilers 3400 mm Length 3400 mm Shell plates: Material Steel Tensile strength 44-50 kg. mm²

ickness 22.5 mm Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. ✓

. seams T.R. D.B.S. ✓ Diameter of rivet holes in circ. seams 26 mm Pitch of rivets 83 mm

centage of strength of circ. end seams plate 68.6 % Percentage of strength of circ. intermediate seam plate ✓

centage of strength of longitudinal joint rivets 46.7 % Working pressure of shell by Rules 12.14 kg. cm²

ickness of butt straps outer 17 mm No. and Description of Furnaces in each Boiler Two corrugated

erial Steel Tensile strength 41-47 kg. mm² Smallest outside diameter 1076 mm

th of plain part top ✓ Thickness of plates 13 mm Description of longitudinal joint Welded

ensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 13.5 kg. cm²

plates in steam space: Material Steel Tensile strength 41-47 kg. mm² Thickness 22 mm Pitch of stays 350 x 406 mm

are stays secured Obt. nuts and washers Working pressure by Rules 12.9 kg. cm²

e plates: Material front Steel Tensile strength 41-47 kg. mm² Thickness 22 mm

n pitch of stay tubes in nests 240 mm Pitch across wide water spaces 330 mm Working pressure front 14.5 kg. mm²

lers to combustion chamber tops: Material Steel Tensile strength 44-50 kg. cm² Depth and thickness of girder back 17.8 " "

entre 2 (180 x 20) mm Length as per Rule 735 mm Distance apart 210 mm No. and pitch of stays ✓

ick 2-228 mm Working pressure by Rules 15.6 kg. cm² Combustion chamber plates: Material Steel

ile strength 41-47 kg. mm² Thickness: Sides 17.5 mm Back 18 mm Top 17.5 mm Bottom 17.5 mm

h of stays to ditto: Sides 228 x 210 - 190 Back 216 x 203 mm Top 228 x 210 mm Are stays fitted with nuts or riveted over Both

king pressure by Rules 12.01 kg. cm² Front plate at bottom: Material Steel Tensile strength 41-47 kg. mm²

ickness 22 mm Lower back plate: Material Steel Tensile strength 41-47 kg. mm² Thickness 22 mm

h of stays at wide water space 330 x 216 mm Are stays fitted with nuts or riveted over Margin stays with nuts

king Pressure 17.8 kg. cm² Main stays: Material Steel Tensile strength 45.4-48.2 kg. mm²

eter At body of stay, 2 3/8" x 3" No. of threads per inch 6 Area supported by each stay 142100 mm²

king pressure by Rules 12.6 kg. cm² Screw stays: Material Steel Tensile strength 42.3-42.5 kg. mm²

eter At turned off part, 34 x 37 mm No. of threads per inch 9 Area supported by each stay 43320 mm²

Working pressure by Rules 13.1 kg. cm^{-2} Are the stays drilled at the outer ends *No* Margin stays: Diameter 34.237 mm
 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 $2\frac{1}{2}"$ Thickness 3.25 mm No. of threads per inch 9
 Pitch of tubes $89 \times 92 \text{ mm}$ Working pressure by Rules $P. 12.5 \text{ \& S. } 15 \text{ kg. cm}^{-2}$ Manhole compensation: Size of opening in
 shell plate $400 \times 500 \text{ mm}$ Section of compensating ring 12000 mm^2 No. of rivets and diameter of rivet holes $44-26 \text{ mm}$
 Outer row rivet pitch at ends 190 mm Depth of flange if manhole flanged 85 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
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of
 stays Inner radius of crown Working pressure by Rules Diameter of rivet holes and pitch
 How connected to shell Size of doubling plate under dome
 of rivets in outer row in dome connection to shell

Type of Superheater ☒ Manufacturers of Tubes
 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 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 23 inclusive for boilers been complied with
 The foregoing is a correct description,
 KOCKUMS MEKANISKA VERKSTADS
 AKTIE-BOLAG
 T. A. W. *W. W. W.* 15-1-1936

Dates of Survey { During progress of work in shops - - -
 while building { During erection on board vessel - - -
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 Total No. of visits 29

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

Survey Fee *See Rpt 4.6.1* : ☒ : When applied for, ☒ 192
 Travelling Expenses (if any) £ : : When received, 192

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

Committee's Minute *FRI. 17 JAN 1936*
 Assigned *See other I.E. Rpt*