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Rpt. 5b.  
MAY 1949

# REPORT ON BOILERS.

No. 18718.

Received at London Office 27 APR 1949

D.O.

Date of writing Report 20-4-1949. When handed in at Local Office 25.4.1949. Port of MIDDLESBROUGH.

No. in Survey held at Stockton. Date, First Survey 23rd February, Last Survey 7th April, 1949.

Reg. Book. on the M.V. LENA MAECKS (Number of Visits 8.)

Built at SUNDERLAND. By whom built BARTKAN & SONS LTD. Yard No. 327 When built 1949

Engines made at WALLSEND. By whom made NORTH EASTERN MARINE ENG CO (LTD) Engine No. 3163 When made 1949

Boilers made at Stockton. By whom made Stockton C.E. & R.B. Ltd. Boiler No. 7122/3 When made 1949.

Owners A/S D/S SVENBERG & D/S of 1912 A/S Port belonging to COPENHAGEN

## EXHAUST GAS VERTICAL DONKEY BOILER.

Made at Stockton By whom made Stockton C.E. & R.B. Boiler No. 7122/3 When made 1949 Where fixed -

Manufacturers of Steel Appleby Frodingham Steel Co.

Total Heating Surface of Boiler 661 sq. ft. Is forced draught fitted Coal or Oil fired Ex. Gas.

No. and Description of Boilers 2 Swirlyflo fire tube exhaust gas boilers. Working pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs. Date of test 1/4/49, 7/4/49. No. of Certificate 7269 & 7271

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 1 - 2" C.I. Double.

Area of each set of valves per boiler per rule as fitted 6.28 Pressure to which they are adjusted 100 lbs/pi Are they fitted with easing gear YES.

State whether steam from main boilers can enter the donkey boiler - Smallest distance between boiler or uptake and bunkers or woodwork -

Is oil fuel carried in the double bottom under boiler - Smallest distance between base of boiler and tank top plating -

Is the base of the boiler insulated - Largest internal dia. of boiler 6'-0" Height 5'-4 1/2"

Shell plates: Material Steel Tensile strength 28-32 Thickness 1/2"

Are the shell plates welded or flanged No Description of riveting: circ. seams end S.R.L. long. seams DR. D.B.S.

Dia. of rivet holes in circ. seams 13/16" Pitch of rivets 1.98" Percentage of strength of circ. seams plate 59.1 rivets 43 of Longitudinal joint plate 75.9 rivets 94.6 combined -

Working pressure of shell by rules 150 lbs per sq. inch. Thickness of butt straps outer 3/8" inner 1/2"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat - Material -

Tensile strength - Thickness - Radius - Working pressure by rules -

Description of Furnace: Plain, spherical, or dished crown - Material - Tensile strength -

Thickness - External diameter top bottom Length as per rule Working pressure by rules -

Pitch of support stays circumferentially - and vertically - Are stays fitted with nuts or riveted over -

Diameter of stays over thread - Radius of spherical or dished furnace crown - Working pressure by rule -

Thickness of Ogee Ring - Diameter as per rule D d Working pressure by rule -

Combustion Chamber: Material - Tensile strength - Thickness of top plate -

Radius if dished - Working pressure by rule - Thickness of back plate - Diameter if circular -

Length as per rule - Pitch of stays - Are stays fitted with nuts or riveted over -

Diameter of stays over thread - Working pressure of back plate by rules -

Tube Plates: Material front back Steel Tensile strength 26-30 Thickness Top 3/8" Btm. 3/8" Mean pitch of stay tubes in nests 11 1/2"

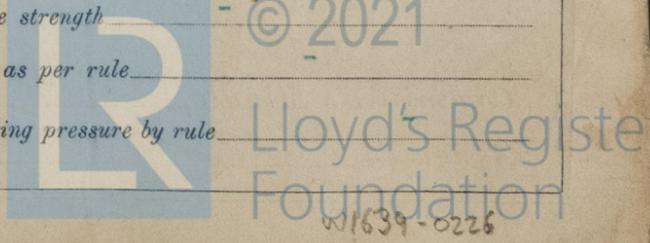
If comprising shell, Dia. as per rule front back Pitch in outer vertical rows Dia. of tube holes BOTTOM stay 2" TOP stay 2.1/16" FRONT plain 2" BACK plain 2.1/16"

Is each alternate tube in outer vertical rows a stay tube - Working pressure by rules front 103-lbs per sq. in. back 103 lbs per sq. in.

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 in each - Working pressure by rule -



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REPORT ON BOILERS

**Crown stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at body of stay, \_\_\_\_\_ or over threads \_\_\_\_\_

No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

**Screw stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at turned off part, \_\_\_\_\_ or over threads \_\_\_\_\_ No. of threads per inch \_\_\_\_\_

Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_

**Tubes:** Material Hot rolled weldless steel. External diameter { plain \_\_\_\_\_ 2" \_\_\_\_\_ or stay \_\_\_\_\_ 2" \_\_\_\_\_ Thickness { \_\_\_\_\_ 10 S.W.G. \_\_\_\_\_ ✓ \_\_\_\_\_ 1" \_\_\_\_\_ ✓ \_\_\_\_\_ 1/2" \_\_\_\_\_ ✓ \_\_\_\_\_

No. of threads per inch welded in ✓ Pitch of tubes 2 7/8" x 2 7/8" ✓ Working pressure by rules \_\_\_\_\_

**Manhole Compensation:** Size of opening in shell plate 16" x 12" ✓ Section of compensating ring 5 1/2" x 3" ✓ No. of rivets and diameter \_\_\_\_\_

of rivet holes welded ✓ Outer row rivet pitch at ends \_\_\_\_\_ - Depth of flange if manhole flanged \_\_\_\_\_ -

**Uptake:** External diameter \_\_\_\_\_ Thickness of uptake plate \_\_\_\_\_

**Cross Tubes:** No. \_\_\_\_\_ External diameters { \_\_\_\_\_ Thickness of plates \_\_\_\_\_

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

The foregoing is a correct description,

*H. G. G. G.*  
 \_\_\_\_\_  
 Manufacturer.

Dates of Survey { During progress of work in shops - - } Feb. 23, Mar. 1, 15, 17, 23, Apr. 1, 5, 7. Is the approved plan of boiler forwarded herewith Yes (If not state date of approval.)

{ During erection on board vessel - - } \_\_\_\_\_ Total No. of visits 8.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under Special Survey and in accordance with the approved plan and Rule Requirements, and the materials and workmanship are good.

On completion these boilers were hydraulically tested to 200 lbs/sq.in and found satisfactory.

These boilers are being forwarded to the North Eastern Marine Engine Works, Wallsend, on-Tyne, for their contracts Nos. 3163/4.

*Boiler No 7122 installed satisfactorily in M.V. LEXA MAERSK, examined under steam & the safety valves adjusted to the approved pressure.*

*J. A. Orle*  
 Newcastle-on-Tyne  
 1<sup>st</sup> March 1949.

Survey Fee £ 20 : 0 : 0 When applied for, 26.4.19 49.

Travelling Expenses (if any) £ \_\_\_\_\_ When received, \_\_\_\_\_

*L. Johnson Stuart*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 9 DEC 1949

Assigned *In units see J.S. Platt*

