

# REPORT ON BOILERS.

No. 1527.

27 JAN 1937

Received at London Office

Date of writing Report 21<sup>st</sup> Jan. 1937 When handed in at Local Office 25<sup>th</sup> Jan. 1937 Port of Malmö.

No. in Survey held at Landskrona Date, First Survey 23<sup>rd</sup> April, 1936 Last Survey 5<sup>th</sup> Jan. 1937.

486 on the Single screw steamer "BELE" (Number of Visits 9.) Tons { Gross 1237 Net 638

Master Landskrona Built at Landskrona By whom built Öresundsvarvet No. 42 Yard No. 42 When built 1937.

Engines made at Landskrona By whom made Öresundsvarvet No. 42 Engine No. 42 When made 1937.

Boilers made at Gothenburg By whom made No. Lindholm - Motala Boiler No. 2578/9 When made 1937.

Nominal Horse Power 182 Owners Stockholms Rederiaktiebol. Svea Port belonging to Stockholm.

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel \_\_\_\_\_ (Letter for Record S.)

Total Heating Surface of Boilers 2 x 116.6 = 233.2 m<sup>2</sup> = 2510 a' Is forced draught fitted yes Coal or Oil fired Coal

No. and Description of Boilers \_\_\_\_\_ Working Pressure \_\_\_\_\_

Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Can each boiler be worked separately yes

Area of Firegrate in each Boiler 2.8 m<sup>2</sup> = 30.1 a' No. and Description of safety valves to each boiler Two direct spring loaded.

Area of each set of valves per boiler { per Rule 4680 mm<sup>2</sup> as fitted 4926 mm<sup>2</sup> Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yes

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

Smallest distance between boilers or uptakes and bunkers 240 mm. Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 380 mm. Is the bottom of the boiler insulated yes

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 \_\_\_\_\_ long. seams \_\_\_\_\_ Pitch of rivets { \_\_\_\_\_

Percentage of strength of circ. end seams { plate rivets \_\_\_\_\_ Percentage of strength of circ. intermediate seam { plate rivets \_\_\_\_\_

Percentage of strength of longitudinal joint { plate rivets combined \_\_\_\_\_ Working pressure of shell by Rules \_\_\_\_\_

Thickness of butt straps { outer inner \_\_\_\_\_ No. and Description of Furnaces in each Boiler \_\_\_\_\_

Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Smallest outside diameter \_\_\_\_\_

Length of plain part { top bottom \_\_\_\_\_ Thickness of plates { crown bottom \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_

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 back \_\_\_\_\_ Tensile strength { \_\_\_\_\_ Thickness { \_\_\_\_\_

Lean 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 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 \_\_\_\_\_

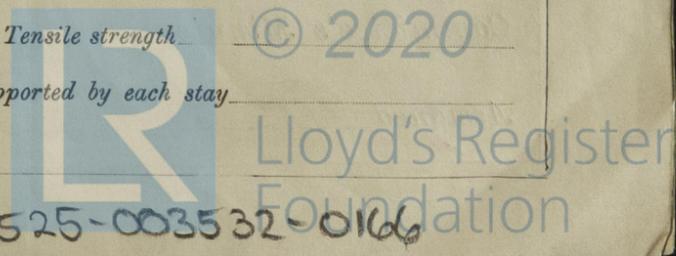
Pitch of stays at wide water space \_\_\_\_\_ Are stays fitted with nuts or riveted over \_\_\_\_\_

Working Pressure \_\_\_\_\_ Main stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Diameter { At body of stay, 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  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 Stay Thickness  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** Schmidts **Manufacturers of** Albert Hahn Rohrmaschinenwerk - Rem Odeleben

Tubes 32.4 - 43.1 kg. mm<sup>2</sup> long 22-30%

Steel forgings 2702. Aljörn Andersson, Svedala.

Steel castings

Number of elements 2 x 32 Material of tubes Steel Internal diameter and thickness of tubes 19 mm. 3 mm

Material of headers Cast steel Tensile strength 48.1 - 49.2 kg. mm<sup>2</sup> Thickness 20 mm. Can the superheater be shut off

the boiler be worked separately Yes long 35% Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes.

Area of each safety valve 1256.6 mm<sup>2</sup> Are the safety valves fitted with easing gear Yes Working pressure as

Rules 14 kg. cm<sup>2</sup> Pressure to which the safety valves are adjusted 14.3 kg. cm<sup>2</sup> Hydraulic test pressure

tubes 70 kg. cm<sup>2</sup> forgings and castings 50 kg. cm<sup>2</sup> and after assembly in place 50 kg. cm<sup>2</sup> Are drain cock

valves fitted to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,

Manufacture

Dates of Survey  During progress of work in shops - - 23/4, 27/4, 18/6, 27/2-1936. Are the approved plans of boiler and superheater forwarded herewith 20-11-

while building  During erection on board vessel - - 12/11, 27/12, 11/12, 16/12-1936, 5/1-1937. (If not state date of approval.) 8-2-

Total No. of visits 9

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 boilers have been installed onboard under the normal conditions of survey.

See Stockholm report No. 10785!

Survey Fee ... See Rpt. 4! } When applied for, 19

Travelling Expenses (if any) £ : : } When received, 19

For Mr. G. Westergren & myself.

Adunden

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned See Memo Rpt 1527

TUE 9 FEB 1937