

REPORT ON BOILERS.

No. 53C.

Received at London Office

28 DEC 1925

of writing Report 22-12 1925 When handed in at Local Office 24-12 - 1925 Port of Helsingborg

Survey held at Landskrona

Date, First Survey 12th May 1925 Last Survey 17th December 1925

on the Single Screw Steel Steamer "VALENCIA"

(Number of Visits 29) Gross 2230.93 Tons Net 1322.97

Built at Landskrona By whom built Nya Varvs A.B. Öresund and No. 24 When built 1925

Engines made at Landskrona By whom made Nya Varvs Aktiebolaget Öresund Engine No. 1 When made 1925

Boilers made at Landskrona By whom made Nya Varvs Aktiebolaget Öresund Boiler No. 142 When made 1925

Original Horse Power 222 Owners Rederiaktiebolaget Svenska Lloyd Port belonging to Gothenburg

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Mannesmannröhrenwerke Abt. Schulz Knaudt, Lückingen, Germany (Letter for Record S.)

Heating Surface of Boilers $2 \times 176.5 \text{ m}^2 = 3800 \text{ m}^2$ Is forced draught fitted No Coal or Oil fired Coal

Description of Boilers 2 cylindrical multitubular, single ended. Working Pressure $13 \text{ kg/cm}^2 = 185 \text{ lbs}$

Tested by hydraulic pressure to 328 lbs Date of test 22-9-1-10-25 No. of Certificate 142 Can each boiler be worked separately Yes

Firegrate in each Boiler 42 No. and Description of safety valves to each boiler 2 Direct spring loaded.

of each set of valves per boiler per Rule 12 as fitted 30.6 Pressure to which they are adjusted 190 lbs. Are they fitted with easing gear Yes.

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

Least distance between boilers or uptakes and bunkers or woodwork 9" horiz. & 18" vert. Is oil fuel carried in the double bottom under boilers No.

Least distance between shell of boiler and tank top plating 19" Is the bottom of the boiler insulated Yes.

Least internal dia. of boilers 4271 mm Length 3550 mm Shell plates: Material Steel Tensile strength 44.1-47.0 kg/cm²

Thickness 32 mm Are the shell plates welded or flanged None Description of riveting: circ. seams Zigzag riv. inter. 90 mm

Seams Double butt straps Diameter of rivet holes in circ. seams 13/16 (30.16 mm) Pitch of rivets 90 mm

Percentage of strength of circ. end seams plate 60 % rivets 48 % Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 83.33 % rivets 102.0 % combined 87.0 % Working pressure of shell by Rules $13.5 \text{ kg/cm}^2 = 192 \text{ lbs/sq. in.}$

Thickness of butt straps outer 32 mm inner 32 mm No. and Description of Furnaces in each Boiler 3 corrugated.

Material Steel Tensile strength 36.0-37.8 kg/cm² Smallest outside diameter 1076 mm

of plain part top bottom Thickness of plates 17 mm Description of longitudinal joint Welded.

of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules $14.25 \text{ kg/cm}^2 = 203 \text{ lbs/sq. in.}$

plates in steam space: Material Steel Tensile strength 41.1-42.5 kg/cm² Thickness 26 mm Pitch of stays 520 x 360

are stays secured Dbl. nuts & washers, riveted strips. Working pressure by Rules $13.2 \text{ kg/cm}^2 = 188 \text{ lbs/sq. in.}$

plates: Material front Steel Tensile strength 41.1-41.3 kg/cm² Thickness 26 mm

back Steel Tensile strength 41.2-43.5 " " Thickness 22 mm

pitch of stay tubes in nests 216 x 204 mm Pitch across wide water spaces 380 mm 388 mm Working pressure front 15.3 kg/cm² = 217 lbs back 15.8 " = 225 "

ers to combustion chamber tops: Material Steel Tensile strength 44 kg/cm² Depth and thickness of girder

centre 210 x 22 x 2 mm Length as per Rule 840 mm Distance apart 180 mm No. and pitch of stays

ch 3 - 210 mm Working pressure by Rules $16.96 \text{ kg/cm}^2 = 241 \text{ lbs}$ Combustion chamber plates: Material Steel

le strength 41.3-44.4 kg/cm² Thickness: Sides 18 mm Back 16 mm Top 18 mm Bottom 20 mm

of stays to ditto: Sides 210 x 185 Back 160 x 160 Top 210 x 180 Are stays fitted with nuts or riveted over Both. See plan.

ing pressure by Rules $13.6 \text{ kg/cm}^2 = 193 \text{ lbs}$ Front plate at bottom: Material Steel Tensile strength 41.1-41.3 kg/cm²

ness 26 mm Lower back plate: Material Steel Tensile strength 41.5-42.4 kg/cm² Thickness 22 mm

of stays at wide water space 388 x 160 Are stays fitted with nuts or riveted over Nuts on margin stays.

ing Pressure 15.8 kg/cm² = 225 lbs Main stays: Material Steel Tensile strength 45-47 kg/cm²

At body of stay, No. of threads per inch 8 Area supported by each stay 190000 mm²

Over threads 76 mm = 3" Working pressure by Rules $16.2 \text{ kg/cm}^2 = 230 \text{ lbs}$ Screw stays: Material Steel Tensile strength 40-41.3 kg/cm²

At turned off part, 35.1 mm No. of threads per inch 10 Area supported by each stay 38850 mm²

Over threads 1 1/2"

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Working pressure by Rules $475 \text{ kg} = 210 \text{ lb}$ Are the stays drilled at the outer ends *No.* Margin stays: Diameter { At turned off part, 41.5 mm
Over threads $1\frac{3}{4}"$ No. in
No. of threads per inch 10 Area supported by each stay 62080 mm^2 Working pressure by Rules $14 \text{ kg/cm}^2 = 200 \text{ lb}$ Reg. Book.
Tubes: Material *Steel* External diameter { Plain $3"$ Thickness { $4 + \text{mm}$ No. of threads per inch 11 1362
Pitch of tubes 108×102 Working pressure by Rules $175 \text{ kg/cm}^2 = 250 \text{ lb/sq. in.}$ Manhole compensation: Size of opening
shell plate $480 - 400$ Section of compensating ring 20000 mm^2 No. of rivets and diameter of rivet holes $34 - 1\frac{1}{16}"$ engines m
Outer row rivet pitch at ends 136 mm Depth of flange if manhole flanged 90 mm Steam Dome: Material *Steel* boilers m
Tensile strength *✓* Thickness of shell *✓* Description of longitudinal joint *✓* registered
Diameter of rivet holes *✓* Pitch of rivets *✓* Percentage of strength of joint { Plate *✓* Rivets *✓* No. and diamet
Internal diameter *✓* Working pressure by Rules *✓* Thickness of crown *✓* better for
stays *✓* Inner radius of crown *✓* Working pressure by Rules *✓* Diameter of rivet holes and
How connected to shell *✓* Size of doubling plate under dome *✓* o. of Ce
of rivets in outer row in dome connection to shell *✓* tety val

Type of Superheater *The Superheater Co. Ltd. Manchester* Manufacturers of { Tubes *See Certificate No C 1849 dated*
Steel castings *Manchester 6-10-1925* re they f
Number of elements 88 Material of tubes *Steel* Internal diameter and thickness of tubes $16 \text{ mm} - 3 \text{ mm}$ allest a
Material of headers *Forged Steel* Tensile strength *✓* Thickness 25 mm Can the superheater be shut material
the boiler be worked separately *Yes* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *Yes* descrip. o
Area of each safety valve 804 mm^2 Are the safety valves fitted with easing gear *Yes* Working pressure up of pl
Rules $24.2 \text{ \& } 26.4 \text{ kg/cm}^2$ Pressure to which the safety valves are adjusted 195 lbs/sq. in. Hydraulic test pres
tubes $1000 \text{ lbs. (as per Cert.)}$, castings $555 \text{ lbs. (as per Cert.)}$ and after assembly in place *✓* Are drain cocks or valves
to free the superheater from water where necessary *Yes* boiler 2
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *Yes* description
The foregoing is a correct description, p 9
NYA VARYSÄKTIEBOLAGET ÖRESUND Manufactaltest p

1925:-
Dates of Survey { During progress of work in shops - *May 12, 18, 23, 27, June 11, 17, 18, July 3, 7, 17, 21, Aug 1, 5, 12, 19, 28, Sept. 5, 12, 17, 22, Oct. 1, 8,* Are the approved plans of boiler and superheater forwarded herewith *No.*
(If not state date of approval.) Boilers: *31-3-1925*
while building { During erection on board vessel - *Oct. 20, 26, Nov. 4, 17, 23, Dec. 5, 10, 17.* Total No. of visits 29 Superh. *22-9-1925*
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GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been built* ter spa
under special survey in accordance with the approved and all the Rul ler at
requirements have been complied with. rking
The workmanship is good. meter
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Survey Fee £ *See Rpt. 4.* When applied for. 192
Travelling Expenses (if any) £ *✓* : : When received. 192

Adunden
Engineer Surveyor to Lloyd's Register of S

Committee's Minute TUES. 5 JAN 1926

Assigned

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See Endorsement on First Entry