

REPORT ON BOILERS.

No. 25617

24 NOV 1949

Received at London Office

Date of writing Report 19-11-49 When handed in at Local Office 19-11-49 Port of Antwerp
 No. in Reg. Book 10683 Survey held at Antwerp Date, First Survey See Rpt-1 Last Survey 19
 on the S.S. GEORGY SEDOV (Number of Visits 1538)
 Master Glasgow Built at Glasgow By whom built Dr. W. Henderson & Co. Yard No. 1909 When built 1909
 Engines made at Glasgow By whom made Dr. W. Henderson & Co. Ltd. Engine No. 1909 When made 1909
 Boilers made at Leningrad (stated) By whom made Marty Woods (stated) Boiler No. 1934 (stated) When made 1934 (stated)
 Nominal Horse Power U.S.S.R. Owners U.S.S.R. Port belonging to Archangel

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record)
 Total Heating Surface of Boilers 285 m² Is forced draught fitted Yes Coal or Oil fired Coal
 No. and Description of Boilers 2 - S.E. Scotch Working Pressure 14 Kgs/cm²
 Tested by hydraulic pressure to 1 1/2 WP + 3.5 Kgs/cm² Date of test 8-11-49 No. of Certificate - Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler 5.4 m² No. and Description of safety valves to each boiler 2 - Direct Spring loaded
 Area of each set of valves per boiler per Rule 1216 mm² Pressure to which they are adjusted 14 Kgs/cm² Are they fitted with easing gear Yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler -
 Smallest distance between boilers or uptakes and bunkers or woodwork 0.51 m Is oil fuel carried in the double bottom under boilers No
 Smallest distance between shell of boiler and tank top plating 0.48 m Is the bottom of the boiler insulated Yes
 Largest internal dia. of boilers 4320 mm Length 3.408 m Shell plates: Material Steel Tensile strength DR. Lap. 107.21 mm
 Thickness 32 mm Are the shell plates welded or flanged No Description of riveting: circ. seams end 107.21 mm
 long. seams TR. DBS Diameter of rivet holes in circ. seams 34/35 mm Pitch of rivets 360 mm
 Percentage of strength of circ. end seams plate 66 rivets 48.2 Percentage of strength of circ. intermediate seam plate 66 rivets 72
 Percentage of strength of longitudinal joint plate 80 rivets 102 combined 92 Working pressure of shell by Rules 14.8 Kgs/cm²
 Thickness of butt straps outer 24 inner 26 No. and Description of Furnaces in each Boiler 3 - Corrugated Morrison Section
 Material Steel Tensile strength 26-30 tons/m² Smallest outside diameter 1050 mm
 Length of plain part top 16 mm Thickness of plates bottom 16 mm Description of longitudinal joint Weld
 Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 15.6 Kgs/cm²
 End plates in steam space: Material Steel Tensile strength 26 mm Thickness 415 + 460 mm
 How are stays secured Double Nuts & Washers Working pressure by Rules 14.6 Kgs/cm²
 Tube plates: Material Steel Tensile strength 24 mm Thickness 22 mm
 Mean pitch of stay tubes in nests 257 mm Pitch across wide water spaces 370 mm Working pressure front 15.2 Kgs/cm²
 Ribs to combustion chamber tops: Material Steel Tensile strength back 15.8
 centre 280 x 14 mm Length as per Rule 748 mm Distance apart 200 mm No. and pitch of stays 3 @ 180 mm
 Working pressure by Rules 15.9 Kgs/cm² Combustion chamber plates: Material Steel
 Tensile strength Thickness: Sides 16 mm Back 16 mm Top 16 mm Bottom 22 mm
 Pitch of stays to ditto: Sides 200 x 180 mm Back 200 x 205 mm Top 190 x 200 mm Are stays fitted with nuts or riveted over fitted with nuts
 Working pressure by Rules 16.3 Kgs/cm² Front plate at bottom: Material Steel Tensile strength Thickness 24 mm
 Lower back plate: Material Steel Tensile strength Thickness 24 mm
 Pitch of stays at wide water space 370 x 206 Are stays fitted with nuts or riveted over fitted with nuts
 Working pressure 15.4 Kgs/cm² Main stays: Material Steel Tensile strength meter At body of stay 20 mm
 meter Over threads 24.5 Kgs/cm² No. of threads per inch 6 Area supported by each stay 1357 cm²
 Working pressure by Rules meter At turned off part 176 + 15/16 No. of threads per inch 9 Area supported by each stay 410 cm²

Working pressure by Rules 17.5 kg/cm^2 Are the stays drilled at the outer ends. *No* Margin stays: Diameter $\begin{cases} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{cases} \begin{cases} 15/8'' \\ 17.9 \text{ kg/cm}^2 \end{cases}$
No. of threads per inch *9* Area supported by each stay 400 cm^2 Working pressure by Rules 17.9 kg/cm^2
Tubes: Material *Steel* External diameter $\begin{cases} \text{plan} \\ \text{stay} \end{cases} \begin{cases} 70 \text{ mm} \\ 70 \text{ mm} \end{cases}$ Thickness $\begin{cases} 4 \text{ mm} \\ 8 \text{ mm} \end{cases}$ No. of threads per inch *11*
Pitch of tubes $102 \times 98 \text{ mm}$ Working pressure by Rules 19.5 kg/cm^2 Manhole compensation: Size of opening in
shell plate $300 \times 400 \text{ mm}$ Section of compensating ring *Flanged* No. of rivets and diameter of rivet holes $44 \times 85 \text{ mm}$
Outer row rivet pitch at ends Depth of flange if manhole flanged 100 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 $\begin{cases} \text{Plate} \\ \text{Rivets} \end{cases}$
Internal diameter Working pressure by Rules Thickness of crown No. and diameter of
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

Manufacturers of $\begin{cases} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{cases}$
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 forgings and 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 22 inclusive for boilers been complied with *Yes*

The foregoing is a correct description,

Manufacturer

Dates of Survey $\begin{cases} \text{During progress of} \\ \text{work in shops} - - \\ \text{while} \\ \text{building} \end{cases} \begin{cases} \text{During erection on} \\ \text{board vessel} - - - \end{cases}$

Are the approved plans of boiler and superheater forwarded herewith
(If not state date of approval.)

Total No. of visits

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 Two Boilers are stated to have been constructed at the Marty Works - Leningrad in 1934. For details of Recommendations & Repairs effected please see Report 9.

Survey Fee $\text{£ } \dots$: : } When applied for, \dots 19.....
Travelling Expenses (if any) $\text{£ } \dots$: : } When received \dots 19.....

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI, 30 DEC 1940

Assigned

See minute on Rpt. 9



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Foundation