

REPORT ON BOILERS.

No. 47.

Received at London Office

Date of writing Report 4th DEC. 1929 When handed in at Local Office 19 Port of LENINGRAD

No. in Survey held at LENINGRAD Date, First Survey 15th FEB. 1927 Last Survey 19th Nov. 1929

Reg. Book 8343 on the M/S "COOPERATZIA" (Number of Visits 5) Gross 3767.2 Tons Net 2164.4

Built at LENINGRAD By whom built SEVERNEY S.B. YARD Yard No. 307 When built 1929

Engines made at LENINGRAD By whom made RUSSIAN DIESEL WORKS Engine No. 307 When made 1929

Boilers made at LENINGRAD By whom made SEVERNEY S.B. YARD Boiler No. 307 When made 1929

Owners SOVTORGFLOT Port belonging to LENINGRAD

WASTE HEAT VERTICAL ~~DONKEY~~ BOILER.

Made at LENINGRAD By whom made SEVERNEY SHIPBUILDING YARD Boiler No. 307 When made 1929 Where fixed ENGINE ROOM

Manufacturers of Steel JORSKY STATE STEEL WORKS, NEAR LENINGRAD

Total Heating Surface of Boiler 52.5 SQ. MET Is forced draught fitted No Coal or Oil fired OIL

No. and Description of Boilers ONE VERTICAL TUBULAR WASTE HEAT BOILER Working pressure 5 kg/cm²

Tested by hydraulic pressure to 10 kg/cm² Date of test 18th JUNE 1929 No. of Certificate 1026

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler TWO SPRING LOADED

Area of each set of valves per boiler per rule 6405 Sq. m. as fitted 10050 Sq. m. Pressure to which they are adjusted 5 kg/cm² Are they fitted with easing gear YES

State whether steam from main boilers can enter the donkey boiler NONE Smallest distance between boiler or uptake and ^{CASING} bunkers 5"

Is oil fuel carried in the double bottom under boiler NONE Smallest distance between base of boiler and tank top plating BOILER PLACED ON PLATFORM ABOVE MAIN ENGINE

Is the base of the boiler insulated No Largest internal dia. of boiler 1520 mm Height 2538 mm

Shell plates: Material STEEL Tensile strength 44/51 kg/mm² Thickness 10 mm

Are the shell plates welded or flanged No Description of riveting: circ. seams end SINGLE inter SINGLE long. seams D.R. LAP.

Dia. of rivet holes in circ. seams 19 mm long. seams 16 mm Pitch of rivets 49.3 mm 54.6 mm Percentage of strength of circ. seams plate 61.3% rivets 47% of Longitudinal joint plate 70.7% rivets 60% combined

Working pressure of shell by rules 7.17 kg/cm² Thickness of butt straps outer inner

Shell Crown: ^{BOTTOM} Whether complete hemisphere, dished partial spherical, or flat FLAT Material STEEL

Tensile strength 41/47 kg/mm² Thickness 19 mm Radius Working pressure by rules 11.8 kg/cm²

Description of Furnace: Plain, spherical, or dished crown NONE 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 Tensile strength Thickness Mean pitch of stay tubes in nests

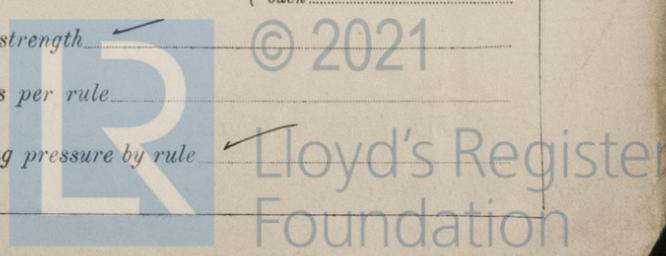
If comprising shell, Dia. as per rule front back Pitch in outer vertical rows Dia. of tube holes FRONT stay plain BACK stay plain

Is each alternate tube in outer vertical rows a stay tube Working pressure by rules 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 in each Working pressure by rule



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 STEEL External diameter { plain 63.5 mm Thickness { 3 mm stay 63.5 mm 5 mm UNDER THREAD

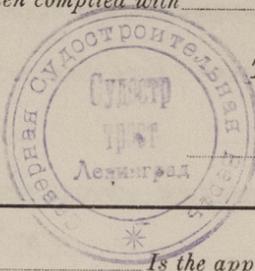
No. of threads per inch 19 ^{APPROVED LONDON LETTER 9/6/27} Pitch of tubes 90 x 90 mm Working pressure by rules 9 kg/cm²

Manhole Compensation: Size of opening in shell plates 300 x 400 mm Section of compensating ring 54 x 17 mm No. of rivets and diameter of rivet holes 20 @ 16 mm DIA. Outer row rivet pitch at ends 62 mm 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,
Alpharany 19 11 29 Manufacturer

Dates of Survey { During progress of work in shops - 15.2.27 - 18.2.27 while building { During erection on board vessel - 18.4.29 - 23.5.29 - 28.5.29 }
 Is the approved plan of boiler forwarded herewith 20/12/28 (If not state date of approval.) COPY AT LONDON OFFICE
 Total No. of visits 5

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been constructed under special survey in accordance with the rules and approved plans. The materials and workmanship are sound and good. The boiler has been fitted on board the vessel in a satisfactory manner examined under steam and safety valves adjusted to 5 kg/cm². The boiler is in my opinion eligible to be included with the machinery for record of L.M.C. 12-29.

Survey Fee ... £ : : } When applied for, 19
 Travelling Expenses (if any) £ : : } When received, 19

H. M. Crivick
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 17 DEC 1929
 Assigned *DLH 7/1 lbs*
(See also 48. yf attached)

FRI. 14 FEB 1930
 TUE. 25 MAR 1930
 FRI. 11 JUL 1930
 FRI. 15 AUG 1930

Lloyd's Register Foundation