

REPORT ON BOILERS.

No. 25515

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No. in Reg. Book 58004 Survey held at NEWPORT, Mon. Date, First Survey July 30th 1948 Last Survey Apr. 21st 1949

on the S.S. "VERGRAY" (Ex "Empire Garry") (Number of Visits 59) Tons 8557 Gross 5261 Net

Master - Built at Wesermunde-G. By whom built Deutsche-Schiff and Maschinenbau A/G. Yard No. - When built 1928

Engines made at Wesermunde-G. By whom made J.C. Tecklenborg A.G. Engine No. ✓ When made 1928

Boilers made at -do- By whom made -do- Boiler No. ✓ When made 1928

M.N. 830 Owners Vergocean S.S. Co.Ld. Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel - (Letter for Record -)

Total Heating Surface of Boilers 12660 + 5850 = 18510 Is forced draught fitted Yes ✓ Coal or Oil fired Yes ✓

No. and Description of Boilers 5-Mult. Marine Type - fitted superheaters Working Pressure 206 lbs.

Tested by hydraulic pressure to 250 lbs. Date of test - No. of Certificate - Can each boiler be worked separately Yes ✓

Area of Firegrate in each Boiler 83.1 No. and Description of safety valves to each boiler 2 - Sat. Steam - High lift type.

Area of each set of valves per boiler per Rule 23.346 ✓ Pressure to which they are adjusted 206 lbs. per sq. inch. ✓ 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 - Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 14'-6" Length 12'-0" Shell plates: Material Steel Tensile strength -

Thickness 1.3" ✓ Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. Lap. ✓

long. seams D.B. Strap TRDBS Diameter of rivet holes in circ. seams 1.3" ✓ 342 Pitch of rivets inter 3.50" ✓ 892 long. seams 1.3" ✓ 362 9.05" ✓ 2302

Percentage of strength of circ. end seams plate As noted Percentage of strength of circ. intermediate seam plate -

Percentage of strength of longitudinal joint rivets As noted. Working pressure of shell by Rules -

Thickness of butt straps outer 1.141" ✓ 29 No. and Description of Furnaces in each Boiler 3 per Boiler-Morrison Type (See Rpt. 4)

Material Mild Steel Tensile strength 28/32 tons per sq. inch. Smallest outside diameter 3'-5.1/4"

Length of plain part top 9.518 Thickness of plates 5" ✓ 1/8" ✓ Description of longitudinal joint Welded ✓

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 216 lbs. per sq. inch.

End plates in steam space: Material Steel Tensile strength - Thickness 1.08" ✓ 27.52 Vertical 17.32 ✓ 4402

How are stays secured Screwed into Plates - Nuts & washers each side Working pressure by Rules 224 lbs. per sq. inch.

Tube plates: Material front Mild Steel Tensile strength - Thickness 1.079 ✓ 27.5 Back 23

Mean pitch of stay tubes in nests - Pitch across wide water spaces 13.424" ✓ 360 Working pressure front 227

Girders to combustion chamber tops: Material Mild Steel Tensile strength - Depth and thickness of girder back 222

at centre 10.23 x (2x17.5) Length as per Rule - Distance apart 7.87" ✓ 200 No. and pitch of stays 3 - 7.87" ✓ 200

Working pressure by Rules 218 lbs. per sq. inch. Combustion chamber plates: Material Mild Steel

Tensile strength - Thickness: Sides .688" ✓ 17.5 Back .688" ✓ 17.5 Top .688" ✓ 17.5 Bottom .905" ✓ 23

Pitch of stays to ditto: Sides 6.88" ✓ 17.5 x 2.18 Back 8.03H ✓ 204 Top 7.874 ✓ 200 Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules 219 lbs. per sq. inch. Front plate at bottom: Material Steel Tensile strength -

Thickness 1.08" ✓ 27.5 Lower back plate: Material Mild Steel Tensile strength - Thickness 1.02" ✓ 26

Pitch of stays at wide water space 360" ✓ 8.066" Are stays fitted with nuts or riveted over Fitted nuts ✓

Working pressure As noted Main stays: Material Mild Steel Tensile strength -

Diameter At body of stay 3" ✓ 76 No. of threads per inch 6" ✓ Area supported by each stay 286.3 per sq. inch.

Working pressure by Rules As noted Screw stays: Material Mild Steel Tensile strength -

Diameter At body of stay Ordinary 1.69 ✓ 43 No. of threads per inch 9 ✓ Area supported by each stay 61.56 per sq. inch.

Working pressure by Rules As noted Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, 1.929 49
Over threads. 49
No. of threads per inch 9 ✓ Area supported by each stay 57.6 per sq. inch Working pressure by Rules -
Tubes: Material Mild Steel External diameter { Plain 3" 76 Thickness { .157 4
Stay 3" .325 8.5 No. of threads per inch -
Pitch of tubes 4.133" 105 x 105 Working pressure by Rules As noted Manhole compensation: Size of opening in
shell plate 15.75 x 11.81" Section of compensating ring 1.37 x 41.34" x 3.93 No. of rivets and diameter of rivet holes 56 @ 71.417"
Outer row rivet pitch at ends 6.49 Depth of flange if manhole flanged 3.94 100 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 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 Schmidt Type Manufacturers of { Tubes -
Steel forgings -
Steel castings -
Number of elements 410 Material of tubes Mild Steel Internal diameter and thickness of tubes .63 x .118
Material of headers Cast Steel Tensile strength - Thickness .785 (Min.) Can the superheater be shut off and
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 ✓
Area of each safety valve 1.96 per sq. inch ✓ Are the safety valves fitted with easing gear Yes ✓ Working pressure as per
Rules - Pressure to which the safety valves are adjusted 206 lbs. per sq. inch ✓ Hydraulic test pressure:
tubes 850 lbs. per sq. inch forgings and castings - and after assembly in place 350 Are drain cocks or
valves fitted to free the superheater from water where necessary Valves
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 { During progress of work in shops - - No Are the approved plans of boiler and superheater forwarded herewith 22/12/48
while building { During erection on board vessel - - - ✓ (If not state date of approval.)
Total No. of visits ✓

Is this Boiler a duplicate of a previous case No If so, state Vessel's name and Report No. -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boilers and superheaters of this
vessel originally built to Germanisher Lloyd Classification, have been examined, repaired as found
necessary, examined under hydraulic test and under steam, the combustion chamber backs were
specially examined and no sign of distortion was found. The boilers are in my opinion such as
could be accepted for Classification by the Committee, with record of B.S. 4,49.

Survey Fee ... £ See Rpt. 4 } When applied for, ... 19...
Travelling Expenses (if any) £ : : } When received ... 19...

J. L. Smith.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI 14 OCT 1949

Assigned



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Foundation