

REPORT ON BOILERS.

No. 21702

Received at London Office 18 NOV 1935

Writing Report 10.11.1935 When handed in at Local Office

Port of Hamburg

Survey held at Hamburg Date, First Survey 1st August 35 Last Survey 30th October 1935

on the Steel Single Sc. Oil Tanker "Marina" (Number of Visits 7) Gross 9898 Tons Net 5903

Built at Hamburg By whom built Deutsche Werf. A.G. Yard No. 161 When built 1935

Engine made at Berlin By whom made A.E.G. Turbinenfabrik Engine No. 226 When made 1935

Boiler made at Hamburg By whom made Deutsche Werf. A.G. Boiler No. 524 When made 1935

Indicated Horse Power 1167 Owners Thorvald Berg Port belonging to Tonsberg

Waste Heat La Mont Donkey Boiler Coil System.

~~TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.~~

Manufacturers of Steel Messrs. Klöckner Werke A.G. Abt. Georgs-Marion-Werke (Letter for Record S.)

Heating Surface of Boilers 150 m² Is forced draught fitted Coal or Oil fired Exhaust gas fired

and Description of Boilers 1. Waste Heat La Mont Donkey Boiler Coil System Working Pressure 12 Kgs/cm²

Tested by hydraulic pressure to 21.5 Kgs/cm² Date of test 20-8-1935 No. of Certificate 592 Can each boiler be worked separately only in connect. with one of the Scott's Marine D.B.

of Firegrate in each Boiler No. and Description of safety valves to each boiler 1. 1 spring loaded

of each set of valves per boiler as fitted 962 mm² = 35 mm φ Pressure to which they are adjusted 12 Kgs/cm² Are they fitted with easing gear yes

Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Least distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers Tween Deck

Least distance between shell of boiler and tank top plating 3 m. Is the bottom of the boiler insulated

Least internal dia. of boilers 1580 mm Length 4040 mm Distributor Headers Shell plates: Material O.H. Steel Tensile strength 41 ÷ 47 Kgs/mm²

Thickness of shell plates 140 mm 100% bare Are the shell plates welded or flanged Description of riveting: circ. seams end inter.

Thickness of coils 110 mm 70% bare Diameter of rivet holes in circ. seams 26/32 mm Pitch of rivets 3 mm

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 19.8 Kgs/cm²

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

End plates: Material front back Tensile strength Thickness

Lean pitch of stay tubes in nests Pitch across wide water spaces Working pressure front back

Orders to combustion chamber tops: Material Tensile strength Depth and thickness of girder

Distance apart No. and pitch of stays

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, 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, 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 ✓ Thickness { ✓ No. of threads per inch ✓
Stay ✓
Pitch of tubes ✓ Working pressure by Rules ✓ Manhole compensation: Size of op
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 dian
stays ✓ Inner radius of crown ✓ Working pressure by Rules ✓
How connected to shell ✓ Size of doubling plate under dome ✓ Diameter of rivet holes an
of rivets in outer row in dome connection to shell ✓

Type of Superheater ✓ Manufacturers of { Tubes ✓
Steel castings ✓
Number of elements ✓ Material of tubes ✓ Internal diameter and thickness of tubes ✓
Material of headers ✓ Tensile strength ✓ Thickness ✓ Can the superheater be shut
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
Rules ✓ Pressure to which the safety valves are adjusted ✓ Hydraulic test pre
tubes ✓, castings ✓ and after assembly in place ✓ Are drain cocks or valves by
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,

12.11.35

DEUTSCHE WERFT

Manuf

Dates of Survey { During progress of work in shops - - 1/8/35; 9/8/35; 20/8/35.
while building { During erection on board vessel - - - 3/9/35; 17/9/35; 24/10/35; 30/10/35

Are the approved plans of boiler and superheater forwarded herewith 2/4 ✓
(If not state date of approval.)

Total No. of visits 7

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.) *This Waste Heat Donkey Boiler Coil Sy*
has been constructed under special survey, the approved plan and the Secretary
better. The materials used in the construction are of good quality and have been
tested by the Society's Surveyors. The workmanship is good. This W. H. D. B. C. system
is eligible in my opinion for notation in the Society's Register Book with
+ D. B. pressure 170 lbs. ✓

Thickness of washer of the safety valve = 9 mm.

Survey Fee ... Rm. 84 ✓

When applied for, 11. 11. 1935

Travelling Expenses (if any) £ — ✓

When received, 30.4 1934

W. H. D. B. C.

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUE. 26 NOV 1935

TUE. 18 FEB 1936 FRI. 13 MAR 1936

Assigned

See Ham J.E 21702



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Foundation