

REPORT ON BOILERS.

No. 25436

Received at London Office

APR 12 1937

Date of writing Report 8-4-1937 When handed in at Local Office

102

Port of Rotterdam

No. in Survey held at Reg. Book.

Balneo.

Date, First Survey

4-11-36

Last Survey

23-3-1937

(Number of Visits 4)

Gross

Tons

Net

on the

steel tug

"UPESE"

Master

Built at

Balneo

By whom built

W. Boole's Mach. Schep. Card No. 862

When built 1937

Engines made at

Hamburg

By whom made

Reihustey Mach. fab.

Engine No.

When made 1924

Boilers made at

Veendam

By whom made

Veendamse Mach. fab.

Boiler No. 1000

When made 193

Nominal Horse Power

66.5

Owners

Verenigde Ned. landische Schep. Maats. Port belonging to 's Gravenhage

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Mannesmann Röhren Werke AG Schultze-Knaust. (Letter for Record)

Total Heating Surface of Boilers 140 M² 1506 ft² Is forced draught fitted no Coal or Oil fired Coal

No. and Description of Boilers one Multitubular single ended. Working Pressure 12 kg.

Tested by hydraulic pressure to 21 kg. Date of test 2-3-37 No. of Certificate Can each boiler be worked separately

Area of Firegrate in each Boiler 3.77 M² No. and Description of safety valves to each boiler 2 spring loaded.

Area of each set of valves per boiler {per Rule 60 mm. as fitted Pressure to which they are adjusted 12 kg. 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 over 24" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 18" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 3400 mm. Length 2250 mm. Shell plates: Material SM steel Tensile strength 45-51 kg.

Thickness 26 mm. Are the shell plates welded or flanged no Description of riveting: circ. seams {end S.R. lap. inter.

long. seams SB strap. Diameter of rivet holes in {circ. seams 29 mm. long. seams 29 mm. Pitch of rivets {95 mm. 104 mm. 184

Percentage of strength of circ. end seams {plate 69.5 % rivets 38.4 % Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 84.25 % rivets 92.8 % combined 84.2 % Working pressure of shell by Rules 14.15 kg/cm²

Thickness of butt straps {outer 23 mm. inner 23 mm. No. and Description of Furnaces in each Boiler 2 Morrison's type

Material SM steel Tensile strength 30-46 kg/cm² Smallest outside diameter 1032 mm.

Length of plain part {top bottom Thickness of plates {crown bottom 16 mm. Description of longitudinal joint fire welded.

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 15.9 kg/cm²End plates in steam space: Material SM steel Tensile strength 40-48 kg/cm² Thickness 25 mm. Pitch of stays 400 mm.How are stays secured Outside nuts & rivet washers Working pressure by Rules 10 kg/cm²Tube plates: Material {front back SM steel Tensile strength {40-48 kg/cm² 30-46 kg/cm² Thickness {25 mm. 22 mm.Mean pitch of stay tubes in nests 216 mm. Pitch across wide water spaces 400 Working pressure {front 23.5 kg/cm² back 26.4 kg/cm²Girders to combustion chamber tops: Material SM steel Tensile strength 40-48 kg/cm² Depth and thickness of girder

at centre 105 x 2 x 17 Length as per Rule 590 mm. Distance apart 200 mm. No. and pitch of stays

in each 2 x 190 mm Working pressure by Rules 47.8 kg/cm² Combustion chamber plates: Material SM steelTensile strength 30-46 kg/cm² Thickness: Sides 19 mm. Back 20 mm. Top 19 mm. Bottom 19 mm.

Pitch of stays to ditto: Sides 200 x 210 mm Back 200 x 190 mm Top 200 x 190 mm Are stays fitted with nuts or riveted over Both.

Working pressure by Rules 14.2 kg/cm² Front plate at bottom: Material SM steel Tensile strength 40-48 kg/cm²Thickness 25 mm. Lower back plate: Material SM steel Tensile strength 40-48 kg/cm² Thickness 25 mm.

Pitch of stays at wide water space 440 x 190 mm. Are stays fitted with nuts or riveted over nuts.

Working Pressure 15.8 kg/cm² Main stays: Material SM steel Tensile strength 40-48 kg/cm²

Diameter {At body of stay, 85 mm. No. of threads per inch 11 Area supported by each stay 400 x 300 mm.

Working pressure by Rules 23.3 kg/cm² Screw stays: Material SM steel Tensile strength 40-48 kg/cm²

Diameter {At turned off part, 27 mm. No. of threads per inch 8 Area supported by each stay 200 x 210 mm.

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Working pressure by Rules 12.6 kg/cm² the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 44 mm / or Over threads

No. of threads per inch 8 Area supported by each stay 325 x 190 mm Working pressure by Rules 13 kg/cm²

Tubes: Material Sm. steel External diameter { Plain 83.5 mm / Stay 83.5 mm Thickness { 7.25 mm / 3.25 mm No. of threads per inch 11

Pitch of tubes 216 x 216 mm Working pressure by Rules ✓ Manhole compensation: Size of opening in shell plate 407 x 300 mm Section of compensating ring 250 x 25 mm No. of rivets and diameter of rivet holes 40. x 29 mm φ

Outer row rivet pitch at ends ~ 112 mm Depth of flange if manhole flanged 95 mm Steam Dome: Material Sm steel

Tensile strength - Thickness of shell 16 mm Description of longitudinal joint welded

Diameter of rivet holes 8 Pitch of rivets ✓ Percentage of strength of joint { Plate ✓ / Rivets ✓

Internal diameter 460 mm Working pressure by Rules 24.6 kg/cm² Thickness of crown 12 mm No. and diameter of stays none Inner radius of crown 500 mm Working pressure by Rules 24.75 kg/cm²

How connected to shell Double riveted Size of doubling plate under dome 90 mm x 30 mm Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 23 mm 112 mm

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 off and the boiler be worked separately _____

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 _____ 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 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops - - } while building { During erection on board vessel - - }

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

Total No. of visits 4

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

This boiler has been examined internally and externally, dimensions verified with the approved plan and tested as required and found sound and tight.

Survey Fee ... £ machinery report When applied for, 192

Travelling Expenses (if any) £ : : When received, 192

Off Bourse
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 16 APR 1937

Assigned

See Rot. J.E. 25436



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