

REPORT ON BOILERS.

No. 21965

Received at London Office

-9 JUL 1936

Writing Report 17/6/36

When handed in at Local Office

Port of Hamburg

Survey held at Flensburg

Date, First Survey 2/3/36

Last Survey 10/6/36

19

(Number of Visits 12)

Tons { Gross
Net

Built at Hesermünde By whom built Deutsche Schiff- & Maschinenbau A.G.
Werk: Seebeck

Yard No. 548

When built

By whom made

Engine No.

When made

made at Flensburg

By whom made Flensburger Schiffbau-Ges.

Boiler No. 749

When made 1936

al Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Mannesmannröhren-Werke, Alt. Heint. Bierres-Hütte, Huckingen (Letter for Record S)

Heating Surface of Boilers 250 m² Is forced draught fitted _____ Coal or Oil fired _____

Description of Boilers multitubular main Boiler Working Pressure 22.8 lb

Tested by hydraulic pressure to 392 lb Date of test 10/6/36 No. of Certificate 623 Can each boiler be worked separately _____

Area of Firegrate in each Boiler 6.85 m² No. and Description of safety valves to each boiler _____

Number of each set of valves per boiler { per Rule 8930 m² as fitted _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____

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 _____

Least distance between shell of boiler and tank top plating _____ Is the bottom of the boiler insulated _____

Least internal dia. of boilers 4650 mm Length 3375 mm Shell plates: Material S.M. Steel Tensile strength 47-54 kg/mm²

Thickness 38 mm Are the shell plates welded or flanged flanged Description of riveting: circ. seams { end Sp. D.R. inter. _____

Seams dbl. bot. straps Diameter of rivet holes in { circ. seams 38 mm Pitch of rivets { 109 mm long. seams 41 mm { 260 mm

Percentage of strength of circ. end seams { plate 60% rivets 42% Percentage of strength of circ. intermediate seam { plate _____ rivets _____

Percentage of strength of longitudinal joint { plate 84% rivets 96% combined 82% Working pressure of shell by Rules 16.2 kg/cm²

Thickness of butt straps { outer 29.8 mm inner 32.5 mm No. and Description of Furnaces in each Boiler 3 Morrison

Material S.M. Steel Tensile strength 41-47 kg/mm² Smallest outside diameter 1187 mm

Thickness of plates { crown 18.5 mm bottom 18.5 mm Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules 16.2 kg/cm²

Plates in steam space: Material S.M. Steel Tensile strength 41-47 kg/mm² Thickness 27 mm Pitch of stays 455 x 380 mm

Are stays secured nuts inside, nuts & washers outside Working pressure by Rules 16.3 kg/cm²

End plates: Material { front S.M. Steel back S.M. Steel Tensile strength { 41-47 kg/mm² Thickness { 29 mm 23 mm

Minimum pitch of stay tubes in nests 330 x 220 mm Pitch across wide water spaces 370 mm Working pressure { front 16. kg/cm² back 17.8 kg/cm²

Stays to combustion chamber tops: Material S.M. Steel Tensile strength 47-54 kg/mm² Depth and thickness of girder

Centre 235 mm, 2 x 17 mm Length as per Rule 800 mm Distance apart 190 mm No. and pitch of stays

Each 3, 180 mm Working pressure by Rules 17.8 kg/cm² Combustion chamber plates: Material S.M. Steel

Tensile strength 41-47 kg/mm² Thickness: Sides 16 mm Back 16 mm Top 16 mm Bottom 25 mm

Pitch of stays to ditto: Sides 180 x 190 mm Back 180 x 200 mm Top 16 mm Are stays fitted with nuts or riveted over with nuts

Working pressure by Rules 17.4 kg/cm² (min) Front plate at bottom: Material S.M. Steel Tensile strength 41-47 kg/mm²

Thickness 29 mm Lower back plate: Material S.M. Steel Tensile strength 41-47 kg/mm² Thickness 26 mm

Pitch of stays at wide water space 360 x 180 mm Are stays fitted with nuts or riveted over with nuts

Working Pressure 24. kg/cm² Main stays: Material S.M. Steel Tensile strength 44-50 kg/mm²

Diameter { At body of stay, 72 mm 56 mm No. of threads per inch 6 Area supported by each stay 455 x 430, 360 x 180 mm

Over threads 80 mm 64 mm Working pressure by Rules 16.2 kg/cm² Screw stays: Material S.M. Steel Tensile strength 41-47 kg/mm²

Diameter { At turned off part, _____ No. of threads per inch 9 Area supported by each stay 180 x 200 mm

Over threads 39 mm 45 mm Working pressure by Rules 16.2 kg/cm²

Working pressure by Rules 16.2 kg/cm²

Working pressure by Rules $16.6, 16.3$ Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 48 mm 54 mm

No. of threads per inch 9 Area supported by each stay $280 \times 200, 250 \times 250 \text{ mm}$ Working pressure by Rules 17.5 16.5

Tubes: Material S.M. Steel External diameter { Plain 83 mm Stay 83 mm Thickness { 4 mm 8 mm No. of threads per inch 9

Pitch of tubes $110 \times 110 \text{ mm}$ Working pressure by Rules 16 kg/cm^2 Manhole compensation: Size of opening

shell plate $300 \times 400 \text{ mm}$ Section of compensating ring full plate under dome No. of rivets and diameter of rivet holes $24, 38 \text{ mm}$

Outer row rivet pitch at ends 170 mm Depth of flange if manhole flanged Steam Dome: Material S.M. Steel

Tensile strength $41-47 \text{ kg/mm}^2$ Thickness of shell 15 mm Description of longitudinal joint Exp. D.R.

Diameter of rivet holes 23 mm Pitch of rivets 87 mm Percentage of strength of joint { Plate 74% Rivets 56%

Internal diameter 800 mm Working pressure by Rules 18.6 kg/cm^2 Thickness of crown 19 mm No. and diameter of stays none Inner radius of crown 800 mm Working pressure by Rules 16.7 kg/cm^2

How connected to shell flanged collar Size of doubling plate under dome $1450 \phi, 435 \text{ mm}$ Diameter of rivet holes and of rivets in outer row in dome connection to shell $26 \text{ mm}, 90 \text{ mm}$

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 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 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 22 inclusive for boilers been complied with _____

Flensburger Schiffsbau - Gesellschaft

ppa Plümer

The foregoing is a correct description, _____ Manufacture _____

Dates of Survey { During progress of work in shops - - - Mar. 2, 16, 30 Apr. 5, 22, 29 May 6, 13, 19, 26 Are the approved plans of boiler and superheater forwarded herewith 8/11/36 (If not state date of approval.) while building { During erection on board vessel - - - June: 8, 10 Total No. of visits 12

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Ham. Rep. No: 21964

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

This boiler has been built under special survey in accordance with the approved plan the Secretary's letter and in conformity with the requirements of the Rules. The materials used in the construction and the workmanship are of good quality and the boiler is eligible in my opinion to be recorded in the Register Book with 228 lb pressure when it has been satisfactorily fixed on board, its mountings fitted and the boiler examined under steam and its safety valves adjusted.

Mark on Boiler: No 623 The approved plan has been retained for further reference.

LLOYD'S TEST 392 lb

W.P. 228 lb

P.W. 10.0.36.

will be charged after compl. of the vessel for which intended.

Survey Fee ... £ : _____ When applied for, _____ 10

Travelling Expenses (if any) £ : _____ When received, _____ 10

J.D. Brindley
Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute _____ TUE. 11 AUG 1936

Assigned _____ See *Boiler J.E. 1811*

© 2020 Lloyd's Register Foundation