

REPORT ON BOILERS.

No. 15002

31 MAR 1926

Received at London Office

Date of writing Report 20. 3. 1926 When handed in at Local Office

192

Port of

Rotterdam.

No. in
Surrey held at
eg. Book.

Rotterdam

Date, First Survey 9. 2. 25

Last Survey 19-10-1926

1926

on the Donkey boiler MV "WOENS DRECHT"

(Number of Visits 9)

Gross 4668
Tons Net 2624.

Master

Built at

Rotterdam

By whom built

M. J. Tennoord

Yard No. 301

When built

1926

Engines made at

Rotterdam

By whom made

M. J. Tennoord

Engine No. 534

When made

1926

Boilers made at

Rotterdam

By whom made

M. J. Tennoord

Boiler No. 154-12

When made

1926

Nominal Horse Power

438

Owners

Hooms M. J. De Maas

Port belonging to

Rotterdam

MULTITUBULAR BOILERS—~~MAIN~~, ~~AUXILIARY~~, OR DONKEY.

Manufacturers of Steel Mannesmann Werke Akt. Schulte & Naunus (Letter for Record S)

Total Heating Surface of Boilers

2 x 452 sq

Is forced draught fitted

Coal or Oil fired

Oil

No. and Description of Boilers

2 Multitubular Marine Donkey Boilers

Working Pressure

14 1/2 lbs

Tested by hydraulic pressure to

213 lbs

Date of test 19-10-25

No. of Certificate

830-31

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 High lifting spring loaded

Area of each set of valves per boiler

per Rule

as fitted

50.24 sq

Pressure to which they are adjusted

14 1/2 lbs

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

No woodwork

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Boiler in top of engine room

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

266 mm

Length

3050 mm

Shell plates: Material

J. M. Heel

Tensile strength

28-32 tons

Thickness

16 mm

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

lap 2 x riv

Long. seams

Double butt 2 x riv

Diameter of rivet holes in

circ. seams

20 mm

Pitch of rivets

63 mm

Percentage of strength of circ. end seams

plate

60-25 %

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

81.5 %

Working pressure of shell by Rules

10.4 kg per cm²

Thickness of butt straps

outer

13.5 mm

inner

14 mm

No. and Description of Furnaces in each Boiler

One Morrison patent

Material

J. M. Heel

Tensile strength

41-47.5 kg

Smallest outside diameter

1118 mm

Length of plain part

top

bottom

Thickness of plates

crown

13 mm

Description of longitudinal joint

Welded

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules

12.6 kg per cm²

Stays in steam space: Material

J. M. Heel

Tensile strength

41-47.5 kg

Thickness

20.5

Pitch of stays

440 mm

How are stays secured

Double nuts and thread in plates

Working pressure by Rules

10.8 kg per cm²

Front plates: Material

front J. M. Heel

back J. M. Heel

Tensile strength

41-47.5 kg

Thickness

21 mm

Pitch of stay tubes in nests

216 x 220 mm

Pitch across wide water spaces

386 mm

Working pressure

front 12.5 kg

back 11 kg

Girders to combustion chamber tops: Material

J. M. Heel

Tensile strength

44.1-51 tons

Depth and thickness of girder

centre 170 x 22 x 17.5 mm

Length as per Rule

680 mm

Distance apart

205 mm

No. and pitch of stays

each 2 at 200 mm

Working pressure by Rules

11.9 kg per cm²

Combustion chamber plates: Material

J. M. Heel

Tensile strength

41-47.5 kg

Thickness: Sides

16 mm

Back

16 mm

Top

16 mm

Bottom

Pitch of stays to ditto: Sides

200 x 182 mm

Back

100 x 182 mm

Top

200 x 215 mm

Are stays fitted with nuts or riveted over

Riveted over

Working pressure by Rules

11.2 kg

Front plate at bottom: Material

J. M. Heel

Tensile strength

41-47.5 kg

Thickness

21 mm

Lower back plate: Material

J. M. Heel

Tensile strength

41-47.5 kg

Thickness

21 mm

Pitch of stays at wide water space

Are stays fitted with nuts or riveted over

Working Pressure

15.2 kg per cm²

Main stays: Material

J. M. Heel

Tensile strength

44-47.5 kg

Diameter

At body of stay

40 mm

No. of threads per inch

6

Area supported by each stay

193000 mm²

Working pressure by Rules

15.2 kg per cm²

Screw stays: Material

J. M. Heel

Tensile strength

41-47.5 kg

Diameter

At turned off part

1 1/4

No. of threads per inch

11

Area supported by each stay

390000 mm²

Lloyd's Register

Foundation

1137-0778

Working pressure by Rules *Are the stays drilled at the outer ends* *No* ✓ Margin stays: Diameter { At turned off part, *1 1/2* ✓
or
Over threads *1 1/2* ✓
No. of threads per inch *9* ✓ Area supported by each stay *46.2 melle* Working pressure by Rules *15 1/2 psi* ✓
Tubes: Material *Steel* ✓ External diameter { Plain *46.2 melle* Thickness *0.9 459* ✓ No. of threads per inch *11* ✓
Stay *46.2 melle* Pitch of tubes *100 melle* ✓ Working pressure by Rules *15 1/2 psi* ✓ Manhole compensation: Size of opening
shell plate *410 melle diam* Section of compensating ring *390 x 16 melle* No. of rivets and diameter of rivet holes *133 @ 22 melle*
Outer row rivet pitch at ends *100 melle* Depth of flange if manhole flanged *✓* Steam Dome: Material *S. M. Steel*
Tensile strength *40-32 tons* Thickness of shell *12 melle* Description of longitudinal joint *Lap single riveted* ✓
Diameter of rivet holes *22 melle* Pitch of rivets *50 melle* Percentage of strength of joint { Plate *56%*
Rivets *52%*
Internal diameter *800 melle* Working pressure by Rules *12.8 1/2 psi* ✓ Thickness of crown *19 melle* ✓ No. and diameter
stays *None* ✓ Inner radius of crown *610 melle* Working pressure by Rules *25 1/2 psi* ✓
How connected to shell *Riveted* ✓ Size of doubling plate under dome *390 x 16 melle* Diameter of rivet holes and
of rivets in outer row in dome connection to shell *80 melle* ✓

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 press
tubes *✓*, castings *✓* and after assembly in place *✓* Are drain cocks or valves
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,

Manufact

Dates of Survey { During progress of work in shops - *Apr 9, 12, 13, 14, 15, 16, 17, 18, 19, 20*
while building { During erection on board vessel - *On Machinery report*

Are the approved plans of boiler and superheater forwarded herewith *No*
(If not state date of approval) *10.4.24*

Total No. of visits *11*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been made under special Survey, in accordance with the approved plans, Society's Rules and Secretary's letters, tested as required and workmanship good.*

Survey Fee ... *On Machinery* When applied for, 192

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

Committee's Minute *WED. 7 APR 1926*

Assigned *see minute on attached rpt*