

REPORT ON BOILERS.

No. 15895

1 - DEC 1926

Received at London Office

Date of writing Report 22-11-1926 When handed in at Local Office

192

Port of

Rotterdam

No. in Survey held at

Rotterdam

Date, First Survey

20 July 1926

Last Survey

3-11-1926

Reg. Book.

(Number of Visits 11.)

Tons

Gross 359.48

Net 489.3

on the steel screw tug SCHELDE

Master

Built at

Rotterdam

By whom built

P. Smit & M.S.

Yard No. 400

When built 1926

Engines made at

Rotterdam

By whom made

P. Smit & M.S.

Engine No. 421

When made 1926

Boilers made at

Rotterdam

By whom made

So.

Boiler No. 502

When made 1926

Nominal Horse Power

131.

Owners

Internationale Sleepdienst M.S. Port belonging to Rotterdam

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

William Beardmore & Co. Limited

(Letter for Record S.)

Total Heating Surface of Boilers

185 M^2 1991 ft^2

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

one S.E. multitubular

Working Pressure

12.65 (180 lbs)

Tested by hydraulic pressure to

320 ft

Date of test

23-10-26

No. of Certificate

850

Can each boiler be worked separately

Area of Firegrate in each Boiler

5.4 M^2

No. and Description of safety valves to each boiler

2 spring loaded

Area of each set of valves per boiler

new Rule
diam 70 mm

Pressure to which they are adjusted

100 ft

Are they fitted with easing gear

Yes

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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

over 10"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

over 12"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

4200 mm

Length

3400 mm

Shell plates:

Material S.M. steel

Tensile strength 45-51 Kg

Thickness

29 mm

Are the shell plates welded or flanged

Yes

Description of riveting: circ. seams

end lap 2 x riv.

long. seams

double butt. 3 x riv.

Diameter of rivet holes in

circ. seams 33 mm

Pitch of rivets

107 mm

Percentage of strength of circ. end seams

plate 67%

rivets 46.3%

Percentage of strength of circ. intermediate seam

plate

Percentage of strength of longitudinal joint

plate 85%

rivets 92%

combined 80.5%

Working pressure of shell by Rules

13 Kg/mm

Thickness of butt straps

outer 23 mm

inner 26 mm

No. and Description of Furnaces in each Boiler

3 x Morrison's

Material

S.M. steel

Tensile strength

41-47 Kg/mm

Smallest outside diameter

1030 mm

Length of plain part

top

Thickness of plates

crown 15 mm

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

13.9 Kg/mm

End plates in steam space:

Material S.M. steel

Tensile strength

41-47 Kg

Thickness

20.5 mm

Pitch of stays 450 x 450 mm

How are stays secured

Screwed in plate, double nuts, washers

Working pressure by Rules

13.07 Kg/mm

Tube plates:

Material front S.M. steel

back S.M. steel

Tensile strength

41-47 Kg

Thickness

22 mm

Mean pitch of stay tubes in nests

204 mm

Pitch across wide water spaces

360 mm

Working pressure

front 16.75 Kg

back 29.6 Kg

Girders to combustion chamber tops:

Material S.M. steel

Tensile strength

45-51 Kg

Depth and thickness of girder

at centre

240 x 2 x 16 mm

Length as per Rule

750 mm

Distance apart

200 mm

No. and pitch of stays

in each

3 x 175 mm

Working pressure by Rules

18.1 Kg/mm

Combustion chamber plates:

Material S.M. steel

Tensile strength

41-47 Kg

Thickness: Sides

14 mm

Back

19 mm

Top

17 mm

Bottom

20 mm

Pitch of stays to ditto:

Sides 200 x 175

Back 210 x 210

Top 200 x 175

Are stays fitted with nuts or riveted over margin nutted

Working pressure by Rules

21.4 Kg - 23 Kg

Front plate at bottom:

Material S.M. steel

Tensile strength

41-47 Kg

Thickness

22 mm

Lower back plate:

Material S.M. steel

Tensile strength

41-47 Kg

Thickness

22 mm

Pitch of stays at wide water space

375 mm

Are stays fitted with nuts or riveted over riveted, margin nutted

Working Pressure

24 Kg

Main stays:

Material S.M. steel

Tensile strength

45-51 Kg

Diameter

At body of stay, 75 mm

No. of threads per inch

6

Area supported by each stay

202500 mm

Working pressure by Rules

25.2 Kg

Screw stays:

Material S.M. steel

Tensile strength

41-47 Kg

Diameter

At turned off part, or over threads

back 38 mm sides 35 mm

No. of threads per inch

11

Area supported by each stay

44100 mm, 35000 mm

Working pressure by Rules Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, ✓
 No. of threads per inch 11. ✓ Area supported by each stay 39900 mm² Working pressure by Rules ✓
Tubes: Material steel ✓ External diameter { Plain 76 mm ✓ Thickness { 8.5 mm ✓ No. of threads per inch 9 ✓
 Pitch of tubes 102 x 102 mm ✓ Working pressure by Rules 13.5 kg mm² **Manhole compensation:** Size of opening in
 shell plate 420 x 450 mm ✓ Section of compensating ring 760 x 860 x 29 mm ✓ No. of rivets and diameter of rivet holes 36 x 31.5 mm ✓
 Outer row rivet pitch at ends 230 mm ✓ Depth of flange if manhole flanged ring 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 ✓
 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

Number of elements Material of tubes Manufacturers of { Tubes
 Material of headers Tensile strength Steel castings
 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 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,
MACHINEFABRIEK & SCHEEPSWERF
van R. SMIT Jr., ROTTERDAM. Manufacturer.

Dates { During progress of work in shops - - 20/7 - 28/7 - 5-23/8 - 7/9
 while building { During erection on board vessel - - - 15/10 - 10-23/10 - 26
20-30/10 - 3/11 - 26.

Are the approved plans of boiler and superheater forwarded herewith no
 (If not state date of approval.) 12-4-26.
 Total No. of visits 11.

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

This boiler has been built under special survey, material tested as required and workmanship good. Boiler tested by hydraulic pressure as required and found sound and tight. ✓

Survey Fee £ On machinery report When applied for, 192
 Travelling Expenses (if any) £ : : When received, 192

C.H. Bource
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 3 DEC 1926

Assigned See Ans. H. 1st attached



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