

REPORT ON BOILERS.

No. 20163

16 MAR 1931

Received at London Office

Date of writing Report 7 March 1931 When handed in at Local Office

102

Port of

Rotterdam

No. in Survey held at
Reg. Book.

Rotterdam

Date, First Survey

10/10 - 30

Last Survey

9-1-31

1931

(Number of Visits 8)

Gross 268.41
Tons Net 33.37

on the Steel Screw Tug EBRO

Master

Built at

Rotterdam

By whom built N.V. Maschinenfab - Yard No. 475 When built 1930-31.

Engines made at

Rotterdam

By whom made

Schepman van der Sluis

Engine No. 478

When made 1930-31

Boilers made at

ditto

By whom made

ditto

Boiler No. 611

When made 1930-31

Nominal Horse Power

10807

Owners

Internationale Sleepdienst

Port belonging to

Rotterdam

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

Manufacturers of Steel Broomfield Boiler Works, Harnesman West (Letter for Record S)

Total Heating Surface of Boilers

1708 sq

Is forced draught fitted

Yes

Coal or Oil fired

coal

No. and Description of Boilers

One multitubular boiler 158

Working Pressure

200 lbs.

Tested by hydraulic pressure to

350 lbs

Date of test

9-1-31

No. of Certificate

942

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

45 sq

No. and Description of safety valves to each boiler

2 Spring loaded high lift

Area of each set of valves per boiler

per Rule 4500
as fitted 5662

Pressure to which they are adjusted

200 lbs

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

200 mm

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

200 mm

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

3900 mm

Length

3410

Shell plates: Material

S.M. steel

Tensile strength

44/50 kg

Thickness

39.5 mm

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end double

inter. none

long. seams

Shredder angle nut

Diameter of rivet holes in

circ. seams 36

long. seams 33

Pitch of rivets

109 mm

209 mm

Percentage of strength of circ. end seams

plate 73
rivets 50.1

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 84.5
rivets 99
combined 88.2

Working pressure of shell by Rules

14.2 kg

Thickness of butt straps

outer 24
inner 27

No. and Description of Furnaces in each Boiler

2 Horisons patent 20 cf.

Material

S.M. steel

Tensile strength

41.47

Smallest outside diameter

1100 mm

Length of plain part

top 2
bottom 2

Thickness of plates

crown 16 mm
bottom

Description of longitudinal joint

Welded

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

Yes

Working pressure of furnace by Rules

14.5 kg

End plates in steam space: Material

S.M.

Tensile strength

44.3

Thickness

31

Pitch of stays

470

How are stays secured

Preserved in place and nutted

Working pressure by Rules

14.5

Tube plates: Material

front } S.M.
back }

Tensile strength

43.3

Thickness

23
22

Mean pitch of stay tubes in nests

216

Pitch across wide water spaces

270

Working pressure

front 19.2
back 17.9

Girders to combustion chamber tops: Material

S.M.

Tensile strength

44.3

Depth and thickness of girder

at centre

260 x 2 x 17

Length as per Rule

800

Distance apart

240

No. and pitch of stays

in each

3 x 190

Working pressure by Rules

16.3

Combustion chamber plates: Material

S.M.

Tensile strength

43

Thickness: Sides

21

Back

21.5

Top

21

Bottom

25

Pitch of stays to ditto: Sides

190 x 250

Back

240 x 210

Top

240 x 190

Are stays fitted with nuts or riveted over

riveted over

Working pressure by Rules

14.2

Front plate at bottom: Material

S.M.

Tensile strength

42

Thickness

23

Lower back plate: Material

S.M.

Tensile strength

44

Thickness

22

Pitch of stays at wide water space

270

Are stays fitted with nuts or riveted over

Nutted

Working Pressure

18

Main stays: Material

S.M.

Tensile strength

47

Diameter

At body of stay, 76
or
Over threads

No. of threads per inch

6

Area supported by each stay

460 x 470

Working pressure by Rules

16.9

Screw stays: Material

S.M.

Tensile strength

47

Diameter

At turned off part, 1 3/4
or
Over threads

No. of threads per inch

9

Area supported by each stay

240 x 210

Working pressure by Rules 16.2 Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 2"
No. of threads per inch 9 Area supported by each stay 305 x 210 Working pressure by Rules 16.3
Tubes: Material Capmesium External diameter { Plain 76.2 Thickness { 4.22 No. of threads per inch 9
Pitch of tubes 102 Working pressure by Rules 18.6 Manhole compensation: Size of opening in
shell plate 400 x 500 Section of compensating ring flanges No. of rivets and diameter of rivet holes 34 - 38 mm
Outer row rivet pitch at ends 120 230 Depth of flange if manhole flanged 80 Steam Dome: Material none
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 ✓ Rivets ✓
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 none Manufacturers of { Tubes ✓
Number of elements ✓ Material of tubes ✓ Steel castings ✓
Internal diameter and thickness of tubes
Material of headers ✓ Tensile strength ✓ Thickness ✓ Can the superheater be shut off and
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,
N.V. MACHINEFABRIEK & SCHEEPSWERF
van R. MIT J. ROTTERDAM, Manufacturer.

Dates of Survey { During progress of work in shops - - 10/10 - 18/11 - 3-7/12 1930 3-7/1-3/1 Are the approved plans of boiler and superheater forwarded herewith 1-8-30
while building { During erection on board vessel - - - 21/1 - 14/2 - 3/1 (If not state date of approval.)
Total No. of visits 0

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler has been made and fitted in accordance with the approved plans, Dickkary's letters and tested as required by Rules and found good and tight.

Survey Fee ... £ charged on When applied for, 192
Travelling Expenses (if any) £ 1000 repaid When received, 192

A. P. J. H.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 8 APR 1931
Assigned La F. B. Rpt.