

Rpt. 5a.

REPORT ON BOILERS.

No. 20013

Received at London Office

24 DEC 1931

Date of writing Report 17 Dec 1931 When handed in at Local Office

193

Port of

Rattardam

No. in Survey held at

Rattardam

Date, First Survey 24 Aug 1920 Last Survey 15 Dec 1931

on the BOILER No 246 now fitted in unclamped vessel.

(Number of Visits 10)

Gross Tons

Net

Master

Built at

By whom built

Yard No.

When built

Engines made at

By whom made

Engine No.

When made

Boilers made at

Rattardam

By whom made

Ratt Drong do by NV.

Boiler No. 246

When made 1920

Nominal Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel ~~Handel & Lohm~~ A. & John Spencer & Co. (Letter for Record 5)

Total Heating Surface of Boilers 1257 sq ft

Is forced draught fitted

Coal or Oil fired

No. and Description of Boilers One S.E. multitubular marine boiler Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs Date of test 15-12-31 No. of Certificate 953 Can each boiler be worked separately

Area of Firegrate in each Boiler 37.9 sq ft No. and Description of safety valves to each boiler

Area of each set of valves per boiler ^{per Rule} as fitted Pressure to which they are adjusted Are they fitted with easing gear

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 Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers Length 10'-0" Shell plates: Material S.M. steel Tensile strength 20-32 tons

Thickness 1" Are the shell plates welded or flanged Description of riveting: circ. seams ^{end} Lap 2x rivetslong. seams Double butt 3x rivets Diameter of rivet holes in ^{circ. seams} 1 1/16" ^{long. seams} 1 1/16" Pitch of rivets ^{3 1/2"} ^{7 1/2"}Percentage of strength of circ. end seams ^{plate} 69% ^{rivets} Percentage of strength of circ. intermediate seam ^{plate} ^{rivets}Percentage of strength of longitudinal joint ^{plate} 85.5% ^{rivets} 80 ^{combined} 80.6 Working pressure of shell by Rules 184 lbsThickness of butt straps ^{outer} 7/8" ^{inner} 7/8" No. and Description of Furnaces in each Boiler 2 Harisons type

Material S.M. Tensile strength 26-30 tons Smallest outside diameter 3'-6 9/16"

Length of plain part ^{top} ^{bottom} Thickness of plates ^{crow} 1 9/32" ^{bottom} Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 186 lbs

End plates in steam space: Material S.M. steel Tensile strength 26-30 tons Thickness 2 1/32" Pitch of stays 16" x 15"

How are stays secured Drilled in plate and nuts outside Working pressure by Rules 185 lbs

Tube plates: Material ^{front} S.M. steel ^{back} Tensile strength 26-30 tons Thickness 3 3/4"Mean pitch of stay tubes in nests 8 1/8 x 13 5/16" Pitch across wide water spaces 15 1/4" Working pressure ^{front} 335 lbs ^{back}

Girders to combustion chamber tops: Material S.M. steel Tensile strength 20-32 tons Depth and thickness of girder

at centre 7 x 2 x 1 5/16" Length as per Rule 2'-3 1/2" Distance apart 10" No. and pitch of stays

in each 2 x 8 1/2" Working pressure by Rules 185 lbs Combustion chamber plates: Material S.M. steel

Tensile strength 26-30 tons Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 3/4"

Pitch of stays to ditto: Sides 8 1/2 x 8 7/8" Back 8 1/2 x 8 5/8" Top 8 1/2 x 10" Are stays fitted with nuts or riveted over Riveted over

Working pressure by Rules 185 lbs Front plate at bottom: Material S.M. steel Tensile strength 26-30 tons

Thickness 3/4" Lower back plate: Material S.M. steel Tensile strength 26-30 tons Thickness 2 1/32"

Pitch of stays at wide water space 14 1/4 x 8 3/8" Are stays fitted with nuts or riveted over Riveted at back plate

Working Pressure 279 lbs Main stays: Material S.M. steel Tensile strength 20-32 tons

Diameter ^{At body of stay} 2 1/2" ^{Over threads} 2 3/4" No. of threads per inch 10 Area supported by each stay 2400"

Working pressure by Rules 183 lbs Screw stays: Material S.M. steel Tensile strength 26-30 tons

Diameter ^{At turned off part} 1 5/8" ^{Over threads} 1 5/8" No. of threads per inch 10 Area supported by each stay 72 1/4"Lloyd's Register
Foundation



Working pressure by Rules 103 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, ✓
Over threads 2"

No. of threads per inch 9 Area supported by each stay 7.57" Working pressure by Rules 205 lbs

Tubes: Material Steel External diameter { Plain 3 1/4" Thickness { 10.10 I.M.S. No. of threads per inch 11
Stay 3 1/4" 1/4"

Pitch of tubes 4 7/16" x 4 3/8" Working pressure by Rules 235 lbs Manhole compensation: Size of opening in
shell plate 15 1/2" x 19 1/2" Section of compensating ring 6 1/2" x 1" No. of rivets and diameter of rivet holes 40 x 1"

Outer row rivet pitch at ends 4 1/2" Depth of flange if manhole flanged 3" 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 ✓
Rivets ✓

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 none 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 ✓ 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 ✓

The foregoing is a correct description,
Signature Manufacturer.

Dates of Survey { During progress of work in shops -- 1920. 2/8, 1921. 1/8, 1922. 2/8 Are the approved plans of boiler and superheater forwarded herewith 30-7-20
while building { During erection on board vessel -- 8/3-14/4-20/4-16-24-29/5-1931. 15/12 (If not state date of approval.)

Total No. of visits 10

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler has been made in accordance with the approved plan Secretary's letters and Lloyds' Rules. Material and workmanship good and hydraulic test satisfactory. The boiler will be placed in the unclassified vessel "Jolly Guy", now being renamed brought under Dutch flag and renamed "Rijin". The boiler is a true copy of the ^{boiler} boiler fitted in the unclassified vessel RADIOLEINE Please see Pratt Rep No 19494 dated 7-6-30.

Survey Fee ... £ 100.00 When applied for, 1921
Travelling Expenses (if any) £ : : When received, 192

Signature
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 20 FEB 1940
Assigned Sir F.E. Moly. rpt.