

# REPORT ON BOILERS.

*Tommy Suzanne*

Received at London Office 24 DEC 1931

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

Port of *Rotterdam*

No. in Survey held at *Rotterdam* Date, First Survey *24 Aug 1920* Last Survey *15 Dec 1931*

on the **BOILER No 246** now fitted in unclassified vessel. (Number of Visits *10*) Tons { Gross Net

Master *Rijn ex Jolly Jay* Built at By whom built Yard No. When built

Engines made at By whom made Engine No. When made

Boilers made at *Rotterdam* By whom made *Raff Droogdok B.V. NL* Boiler No. *246* When made *1920*

Nominal Horse Power Owners Port belonging to

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

Manufacturers of Steel *Henschel & Sohn A.G. 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 *Sell steel* Tensile strength *20-32 tons*

Thickness *1"* Are the shell plates welded or flanged  Description of riveting: circ. seams { end lap *2 x rivets*

long. seams *Double butt 3 x rivets* Diameter of rivet holes in { circ. 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 lbs*

Thickness of butt straps { outer *7/8"* inner *7/8"* No. and Description of Furnaces in each Boiler *2 Harrison type*

Material *Sell* Tensile strength *26-30 tons* Smallest outside diameter *3'-6 9/16"*

Length of plain part { top bottom Thickness of plates { crown *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 *Sell 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 *Sell steel* back Tensile strength { *26-30 tons* Thickness { *3 3/4"*

Mean pitch of stay tubes in nests *8 7/8 x 13 5/16"* Pitch across wide water spaces *15 1/4"* Working pressure { front *335 lbs* back

Girders to combustion chamber tops: Material *Sell steel* Tensile strength *20-32 tons* Depth and thickness of girder

at centre *7 x 2 x 15 1/16"* 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 *Sell steel*

Tensile strength *26-30 tons* Thickness: Sides *2 1/32"* Back *2 3/32"* Top *2 3/32"* 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 *Sell steel* Tensile strength *26-30 tons*

Thickness *3/4"* Lower back plate: Material *Sell steel* Tensile strength *26-30 tons* Thickness *2 3/32"*

Pitch of stays at wide water space *14 1/4 x 8 3/8"* Are stays fitted with nuts or riveted over *Not fitted at back plate*

Working Pressure *279 lbs* Main stays: Material *Sell steel* Tensile strength *20-32 tons*

Diameter { At body of stay *2 1/2"* or 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 *Sell steel* Tensile strength *26-30 tons*

Diameter { At turned off part *1 5/8"* or Over threads *1 5/8"* No. of threads per inch *10* Area supported by each stay *72 1/4"*



Working pressure by Rules 103 lbs Are the stays drilled at the outer ends no Margin stays: Diameter  At turned off part.  or  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 1/4" No. of threads per inch 11  Stay 3 1/4"

Pitch of tubes 4 7/16" x 4 3/0" 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 @ 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

How connected to shell  Inner radius of crown  Working pressure by Rules

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

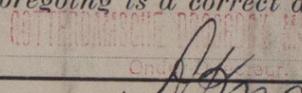
Material of headers  Tensile strength  Thickness  Can the superheater be shut off and the boiler be worked separately

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

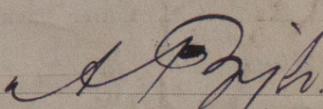
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

The foregoing is a correct description,  
  
 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 repaired brought under Dutch flag and renamed "RIJIN".  
The boiler is a true copy of the <sup>boiler</sup> boiler fitted in the unclassified vessel RADIOLEINE Please see Pratt Rep No 19494 dated 7-6-20.

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

  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 20 FEB 1920  
 Assigned Sir F.E. Welch, rpt.