

REPORT ON BOILERS.

No. 24115

Received at London Office **Jul, 3 1939**

Date of writing Report **28th June 1939** When handed in at Local Office **19** Port of **HAMBURG**

To, in Survey held at **HAMBURG** Date, First Survey **17th March 39** Last Survey **20th June 1939**

230 on the **Twin Seven Motor Tanker GALLIA** (Number of Visits **13**) Gross **9974** Tons Net **8298**

ster Built at **HAMBURG** By whom built **Deutsche Werft A.G.** Yard No. **227** When built **1939**

ines made at **Angsburg** By whom made **Maschinenfabrik Angsburg-Hamburg** Engine No. **68156/57** When made **1939**

ilers made at **HAMBURG** By whom made **Deutsche Werft A.G.** Boiler No. **8038804** When made **1939**

imal Horse Power **1170** Owners **The Texas Co (Norway) A/S** Port belonging to **Oslo**

ULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **Mannesmannröhrenwerke, Duisburg-Huckingen** (Letter for Record **S.**)

tal Heating Surface of Boilers **each boiler 200 sq. metres** Is forced draught fitted **yes** Coal or Oil fired **oil fired**

and Description of Boilers **two single-ended multitubular donkey boilers** Working Pressure **12 kg/cm²**

sted by hydraulic pressure to **21.5 kg/cm²** Date of test **6.5.39** No. of Certificate **334735** Can each boiler be worked separately **yes**

ea of Firegrate in each Boiler **-** No. and Description of safety valves to each boiler **two spring-loaded safety valves**

ea of each set of valves per boiler { per Rule **9333 mm²** as fitted **11349 mm²** Pressure to which they are adjusted **12 kg/cm²** Are they fitted with easing gear **yes**

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

allest distance between boilers or uptakes and bunkers or woodwork **460 mm** Is oil fuel carried in the **bunkers** **double bottom** under boilers **yes**

allest distance between shell of boiler and **tank** top plating **460 mm** Is the bottom of the boiler insulated **yes**

rgest internal dia. of boilers **4100 mm** Length **2300 mm** Shell plates: Material **S.M. Steel** Tensile strength **47-53 kg/mm²**

ickness **25.5 mm** Are the shell plates welded or flanged **flanged, double buttstrap** Description of riveting: circ. seams { end **double row, zigzag** inter. **-**

g. seams **treple row, double buttstrap** Diameter of rivet holes in { circ. seams **29 mm** Pitch of rivets { **92.7 mm** long. seams **29 mm** **185 mm**

ercentage of strength of circ. end seams { plate **68.7 %** rivets **42.8 %** Percentage of strength of circ. intermediate seam { plate **-** rivets **-**

ercentage of strength of longitudinal joint { plate **84.3 %** rivets **100.5 %** combined **88.75 %** Working pressure of shell by Rules **12.03 kg/cm²**

ickness of butt straps { outer **28.5 mm** inner **28.5 mm** No. and Description of Furnaces in each Boiler **three corrugated furnaces (Morrison type)**

aterial **S.M. Steel** Tensile strength **41-47 kg/mm²** Smallest outside diameter **974 mm**

ngth of plain part { top **150 mm** bottom **250 mm** Thickness of plates { crown **12 mm** bottom **12 mm** Description of longitudinal joint **water gas lap welded**

ensions of stiffening rings on furnace or c.c. bottom **-** Working pressure of furnace by Rules **12.4 kg/cm²**

nd plates in steam space: Material **S.M. Steel** Tensile strength **41-47 kg/mm²** Thickness **24 mm** Pitch of stays **460x400 mm**

ow are stays secured **washers & strips riveted to end plate, nuts inside & outside** Working pressure by Rules **12.3 kg/cm²**

be plates: Material { front **S.M. Steel** Tensile strength { **41-47 kg/mm²** Thickness { **24 mm** back **S.M. Steel** **41-47 kg/mm²** **22 mm**

ean pitch of stay tubes in nests **308x208 mm** Pitch across wide water spaces **360 mm** Working pressure { front **13.5 kg/cm²** back **14.16 kg/cm²**

rders to combustion chamber tops: Material **S.M. Steel** Tensile strength **47-53 kg/mm²** Depth and thickness of girder

centre **200 mm x 2x12 mm** Length as per Rule **909 mm** Distance apart **200 mm** No. and pitch of stays

each **four x 210 mm** Working pressure by Rules **12 kg/cm²** Combustion chamber plates: Material **S.M. Steel**

ensile strength **41-47 kg/mm²** Thickness: Sides **16.5 mm** Back **19 mm** Top **16.5 mm** Bottom **24 mm**

itch of stays to ditto: Sides **200x210 mm** Back **200x208 mm** Top **210x200 mm** Are stays fitted with nuts or riveted over **margin stays with nuts**

orking pressure by Rules **15.8 kg/cm²** Front plate at bottom: Material **S.M. Steel** Tensile strength **41-47 kg/mm²**

ickness **24 mm** Lower back plate: Material **S.M. Steel** Tensile strength **41-47 kg/mm²** Thickness **24 mm**

itch of stays at wide water space **1 main stay, pitch circle 815 mm** Are stays fitted with nuts or riveted over **double plates riveted to end plates**

orking Pressure **19.6 kg/cm²** Main stays: Material **S.M. Steel** Tensile strength **41-47 kg/mm²**

iameter { At body of stay, **66.58 mm** No. of threads per inch **6** Area supported by each stay **460x400 mm x 18400 mm²**

orking pressure by Rules **13.6 kg/cm²** Screw stays: Material **S.M. Steel** Tensile strength **41-47 kg/mm²**

iameter { At turned off part, **35.38 mm** No. of threads per inch **9** Area supported by each stay **200x208 mm x 41600 mm²**

Working pressure by Rules 14.4 kg/cm^2 Are the stays drilled at the outer ends ☒ Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 38.38 \text{ mm} = 47.38 \text{ pt.} \\ \text{or} \\ \text{Over threads } 42.0 \text{ mm} = 51.0 \end{array} \right.$
No. of threads per inch 9 Area supported by each stay $284 \times 300 \text{ mm} = 56800 \text{ mm}^2$ Working pressure by Rules 12.65 kg/cm^2
Tubes: Material S-M-Steel External diameter $\left\{ \begin{array}{l} \text{Plain } 76 \text{ mm} \\ \text{Stay } 76 \text{ mm} \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 3.75 \text{ mm} \\ 8+11 \text{ mm} \end{array} \right.$ No. of threads per inch 9
Pitch of tubes $104 \times 104 \text{ mm}$ Working pressure by Rules 14.5 kg/cm^2 Manhole compensation: Size of opening 4.12 kg/cm^2
shell plate $320 \times 425 \text{ mm}$ Section of compensating ring $2 \times (212.5 \times 25.5)$ No. of rivets and diameter of rivet holes $27 = 29 \text{ mm}$
Outer row rivet pitch at ends $\sim 175 \text{ mm}$ Depth of flange if manhole flanged $-$ Steam Dome: Material S-M-Steel
Tensile strength 41.47 kg/mm^2 Thickness of shell 14 mm Description of longitudinal joint oxy-acetylene welded & secured by
Diameter of rivet holes 26 mm Pitch of rivets 84 mm Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right\}$ welding 60%
Internal diameter 900 mm Working pressure by Rules 14.6 kg/cm^2 Thickness of crown 16 mm No. and diameter
stays $-$ Inner radius of crown 320 mm Working pressure by Rules 14.86 kg/cm^2
How connected to shell pressed flange riveted to shell Size of doubling plate under dome $-$ Diameter of rivet holes and
of rivets in outer row in dome connection to shell $29 \text{ mm } \phi = 200 \text{ mm}$

Type of Superheater Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$
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 22 inclusive for boilers been complied with ☒ yes

The foregoing is a correct description,

DEUTSCHE WERFT
AKTIENGESellschaft

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops} \\ \text{while building} \end{array} \right.$ $\left\{ \begin{array}{l} \text{During erection on board vessel} \end{array} \right.$
1939. March 17, April 13, 14, 15, 1936 May 3, 1939. May 10, 19, June 7, 9, 20
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits 13

Is this Boiler a duplicate of a previous case ☒ yes If so, state Vessel's name and Report No. **NUOVA GRANADA** Hambg. Rep. No. 22804
GERMANIA 33050
BRITANNIA 23097

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

these donkey boilers are of good quality.
The materials used in their constructions are made at Works recognised by the Committee and tested by the Society's Surveyors in accordance with the requirements of the Rules.
These donkey boilers having been made under Special Survey in conforming with the approved plan, the Secretary's letter and otherwise in compliance with the requirements of the Rules are eligible in my opinion to be classed with notation in the Register Book.

Two Donkey Boilers - 171 lbs/sq. inch pressure.

Thickness of adjusting washers of safety valves Port boiler port 28.8 mm , starboard 12.5 mm
Starboard boiler port 29.2 mm , starboard 30.0 mm

Survey Fee ... \pounds R 16: 537: When applied for, 22. 6. 1939.

Travelling Expenses (if any) \pounds : 4 : 14 : When received, 8. 7. 1939

H. Röhrs

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

14 JUL 1939
Lee F.E. machy r/h



Lloyd's Register
Foundation