

# REPORT ON BOILERS.

No. 24339

15 JUN 1936

Received at London Office

Date of writing Report 6<sup>th</sup> June 1936 When handed in at Local Office

Port of Hamburg

No. in Survey held at Hamburg  
eg. Book.

Date, First Survey 23 October 35 Last Survey 20<sup>th</sup> May 1936

on the Steel Sc. "TARON" (oil Eng.)

(Number of Visits 12) Tons { Gross 8054  
Net 4756

Builder Hamburg By whom built Deutsche Werft A.G. Yard No. 169 When built 1936

Engines made at Augsburg By whom made Maschinenfabr. Augsburg-Nürnberg Engine No. 671000 When made 1935/36

Boilers made at Hamburg By whom made Deutsche Werft A.G. Boiler No. 531 When made 1935/36

Nominal Horse Power 502 Owners Sarawak Oilfields Comp. Port belonging to Miri.

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

Manufacturers of Steel Messrs Gute Hoffnungshütte A.G. of Oberhausen  
Klöpperwerke A.G. of Georgsmarienhütte (Letter for Record S.)

Total Heating Surface of Boilers 233 m<sup>2</sup> Is forced draught fitted yes Coal or Oil fired oil and exhaust gas fired

No. and Description of Boilers 1; three furnaces multitubular donkey boiler Working Pressure 12.65 Kgs/cm<sup>2</sup> = 180 lbs

Tested by hydraulic pressure to 22.5 Kgs/cm<sup>2</sup> Date of test 3-1-36 No. of Certificate 603 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler oil fired No. and Description of safety valves to each boiler 1; two spring loaded

Area of each set of valves per boiler { per Rule 12512 mm<sup>2</sup>  
as fitted 13296 Pressure to which they are adjusted 12.65 Kgs/cm<sup>2</sup> Are they fitted with easing gear yes

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 400 mm Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating 1040 Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 4362 mm Length 3505 mm Shell plates: Material S.M. Steel Tensile strength 47/53 Kgs/mm<sup>2</sup>

Thickness 29 mm Are the shell plates welded or flanged flanged Description of riveting: circ. seams { end Two rows  
inner 219 229

long. seams double butt strapped and riveted Diameter of rivet holes in { circ. seams 32 mm  
long. seams 32 mm Pitch of rivets { 100 mm  
215 mm

Percentage of strength of circ. end seams { plate 68.0 %  
rivets 54.0 % Percentage of strength of circ. intermediate seam { plate 85.1 %  
rivets 92.5 %

Percentage of strength of longitudinal joint { plate 85.1 %  
rivets 92.5 % Working pressure of shell by Rules 13.3 Kgs/cm<sup>2</sup>

Thickness of butt straps { outer 29 mm  
inner 29 mm No. and Description of Furnaces in each Boiler 3 Morison Furnaces

Material S.M. Steel Tensile strength 41/47 Kgs/mm<sup>2</sup> Smallest outside diameter 1120 mm

Length of plain part { top 217 mm  
bottom 217 mm Thickness of plates { crown 15 mm  
bottom 15 mm Description of longitudinal joint Watergas welded

Dimensions of stiffening rings on furnace or c.e. bottom ✓ Working pressure of furnace by Rules 13.7 Kgs/cm<sup>2</sup>

End plates in steam space: Material S.M. Steel Tensile strength 41/47 Kgs/mm<sup>2</sup> Thickness 29 mm Pitch of stays 420 x 381 mm

How are stays secured screwed in plate, washers inside Working pressure by Rules 18.9 Kgs/cm<sup>2</sup>

Tube plates: Material { front S.M. Steel  
back S.M. Steel Tensile strength { 41/47 Kgs/mm<sup>2</sup> Thickness { 26 mm

Mean pitch of stay tubes in nests 208 x 208 mm Pitch across wide water spaces 360 mm Working pressure { front 15.9 Kgs/cm<sup>2</sup>  
back 40.3

Girders to combustion chamber tops: Material S.M. Steel Tensile strength 47/53 Kgs/mm<sup>2</sup> Depth and thickness of girder

at centre 230 x 2 x 12 mm Length as per Rule 770 mm Distance apart 180 mm No. and pitch of stays

in each 2; 210 mm Working pressure by Rules 14.61 Kgs/cm<sup>2</sup> Combustion chamber plates: Material S.M. Steel

Tensile strength 41/47 Kgs/mm<sup>2</sup> Thickness: Sides 19 mm Back 20 mm Top 19 mm Bottom 25 mm

Pitch of stays to ditto: Sides 220 x 200 mm Back 208 x 200 mm Top 210 x 180 mm Are stays fitted with nuts or riveted over screwed in + riveted

Working pressure by Rules 13.5; 15.9; 15.5 Kgs/cm<sup>2</sup> Front plate at bottom: Material S.M. Steel Tensile strength 41/47 Kgs/mm<sup>2</sup>

Thickness 26 mm Lower back plate: Material S.M. Steel Tensile strength 41/47 Kgs/mm<sup>2</sup> Thickness 26.0 mm

Pitch of stays at wide water space Φ = 500 mm = 196 350 mm<sup>2</sup> Are stays fitted with nuts or riveted over double plate, screwed + outside

Working Pressure 24.4 Kgs/cm<sup>2</sup> Main stays: Material S.M. Steel Tensile strength 41/47 Kgs/mm<sup>2</sup>

Diameter { At body of stay, 71.93 mm  
Over threads 76.00 mm No. of threads per inch 8 Area supported by each stay 420 x 381 = 160 020 mm<sup>2</sup>

Working pressure by Rules 17.3 Kgs/cm<sup>2</sup> Screw stays: Material S.M. Steel Tensile strength 41/47 Kgs/mm<sup>2</sup>

Diameter { At turned off part, 35.0 mm  
Over threads 39.0 mm No. of threads per inch 9 Area supported by each stay 208 x 200 = 41 600 mm<sup>2</sup>



Working pressure by Rules 14.4 kg/cm<sup>2</sup> Are the stays drilled at the outer ends yes Margin stays: Diameter { At turned off part, 38; 47; 50 mm or Over threads 42; 51; 54 .  
No. of threads per inch 9 Area supported by each stay 37 000 mm<sup>2</sup> Working pressure by Rules 14, 4; 30, 4; 35 kg/cm<sup>2</sup>  
Tubes: Material S.M. Steel External diameter { Plain 76 mm. Thickness { 3.75 mm No. of threads per inch 9  
Stay 76 mm Pitch of tubes 104 x 104 mm Working pressure by Rules 18.5 + over 21 kg/cm<sup>2</sup> Manhole compensation: Size of opening  
shell plate 420 x 525 mm Section of compensating ring 29 x 230 mm No. of rivets and diameter of rivet holes 40; 32.2 p.  
Outer row rivet pitch at ends 190 mm Depth of flange if manhole flanged 100 mm 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  
stays Inner radius of crown Working pressure by Rules  
How connected to shell Size of doubling plate under dome Diameter of rivet holes and pic  
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 an  
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 pe  
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure  
tubes, castings and after assembly in place Are drain cocks or valves fitte  
to free the superheater from water where necessary  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,

**DEUTSCHE WERFT**  
**AKTIENGESELLSCHAFT**

Manufacture

Dates of Survey { During progress of work in shops - - 23/0/35; 5/4/35; 11/12/35; 14/12/35; 28/12/35 Are the approved plans of boiler and superheater forwarded herewith yes.  
while building { During erection on board vessel - - 20/3/36; 24/3/36; 24/3/36; 24/4/36; 6/5/36 (If not state date of approval.)  
Total No. of visits 12

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Genota Hamb. Rep. No 21508

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

This Donkey Boiler has been built under special survey in accordance with the approved plan, the Secretary's letters and instructions thereto and in conformity with the Society's Rules. The material used in the construction are made at works recognized by the Committee and have been tested by the Society's Surveyors. Workmanship and materials are of good quality.

The safety valves have been adjusted to 180 lbs p. sq. inch (12.65 kg/cm<sup>2</sup> pressure.

In my opinion this Donkey Boiler is eligible for notation of:-

D.B. pressure 180 lbs. p. sq. inch.

Distance of washers of safety valves:- Port = 25.7 mm

Starb. = 21.9 mm.

Survey Fee ... £ 33.4.00

When applied for, 24th June 1936

Travelling Expenses (if any) £ ...

When received, 6.7.1936

W. Meier

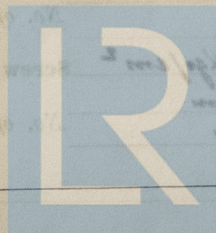
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 19 JUN 1936

Assigned

See other Ham 26  
21939



© 2020

Lloyd's Register  
Foundation