

REPORT ON BOILERS.

No. 20208

Received at London Office

Reporting Report 28-12-31 19

When handed in at Local Office

19

Port of

HAMBURG

Survey held at Hamburg

Date, First Survey 27-3-31

Last Survey 19-12-31 19

on the Steel Twin Sc. "HORN SHELL"

(Number of Visits 13) Tons { Gross 8272
Net 4832

Built at Hamburg

By whom built Deutsche Werft A.G. Yard No. 146 When built 1931

made at Berlin

By whom made Allgem. Elektrizitäts Ges.

Engine No. 222/3 When made 1931

made at Hamburg

By whom made Deutsche Werft A.G.

Boiler No. 435/6 When made 1931

Horse Power 984

Owners ANGLO SAXON PETROL. CO.

Port belonging to London

TITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Gutheffnungshütte, Oberhausen - Kär. Stahlwerke, Mülheim/Ruhr (Letter for Record S)

Heating Surface of Boilers 224 m²

Is forced draught fitted yes

Coal or Oil fired oil & exh. gases

Description of Boilers 2 Multitubular Donkey Boilers

Working Pressure 150 lb

by hydraulic pressure to 275 lb Date of test 18-7-31 No. of Certificate 557-8 Can each boiler be worked separately yes

Firegrate in each Boiler

No. and Description of safety valves to each boiler 1, 2 springs loaded

of each set of valves per boiler { per Rule 7140 mm²
as fitted 7697 mm²

Pressure to which they are adjusted 150 lb Are they fitted with easing gear yes

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

st distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

st distance between shell of boiler and tank top plating 500 mm

Is the bottom of the boiler insulated no

t internal dia. of boilers 3200 mm

Length 3122 mm

Shell plates: Material O.H. Steel

Tensile strength 47-53 kg/mm²

ess 19 mm

Are the shell plates welded or flanged flanged

Description of riveting: circ. seams { end 2 rows, zig-zag
inter. 84.2 mm

ams double butt strapped TR

Diameter of rivet holes in

{ circ. seams 26. mm
long. seams 26. mmPitch of rivets { 84.2 mm
154. mmtage of strength of circ. end seams { plate 69.3 %
rivets 47.5 % 47 %Percentage of strength of circ. intermediate seam { plate
rivetstage of strength of longitudinal joint { plate 83. - %
rivets 120. - %
combined 90.4 %Working pressure of shell by Rules 11.02 kg/cm²ess of butt straps { outer 19. mm
inner 19. mm

No. and Description of Furnaces in each Boiler 2 Morison

ial O.H. Steel

Tensile strength 41-47 kg/mm²

Smallest outside diameter 922 mm

of plain part { top 279 mm
bottom 279 mmThickness of plates { crown 11. mm
bottom 11. mm

Description of longitudinal joint welded

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

Working pressure of furnace by Rules 12.95 kg/cm²

lates in steam space: Material O.H. Steel

Tensile strength 41-47 kg/mm²

Thickness 21. mm

Pitch of stays 360 x 380 mm

are stays secured nuts outside, nuts & riveted washers inside

Working pressure by Rules 12.1 kg/cm²plates: Material { front O.H. Steel
back O.H. SteelTensile strength { 41-47 kg/mm²Thickness { 21. mm
21. mm

pitch of stay tubes in nests 208 x 312 mm Pitch across wide water spaces 360 mm

Working pressure { front 10.85 kg/cm²
back 22.4 kg/cm²

rs to combustion chamber tops: Material O.H. Steel

Tensile strength 47-53 kg/mm²

Depth and thickness of girder

tre 180 mm, 2 x 12 mm

Length as per Rule 612 mm

Distance apart 200 mm

No. and pitch of stays

ch 2, 180 mm

Working pressure by Rules 13.05 kg/cm²

Combustion chamber plates: Material O.H. Steel

le strength 41-47 kg/mm²

Thickness: Sides 20. mm

Back 17.5 mm

Top 20. mm

Bottom 20. mm

of stays to ditto: Sides 190 x 200 mm Back 200 x 200 mm Top 180 x 200 mm

Are stays fitted with nuts or riveted over back riveted over.

ing pressure by Rules 26. - 12.5, 27.5 kg/cm² Front plate at bottom: Material O.H. SteelTensile strength 41-47 kg/mm²

ness 21. mm

Lower back plate: Material O.H. Steel

Tensile strength 41-47 kg/mm²

Thickness 21 mm

of stays at wide water space A = 440 mm

Are stays fitted with nuts or riveted over with nuts

ing Pressure 15.5 kg/cm²

Main stays: Material O.H. Steel

Tensile strength 41-47 kg/mm²ter { At body of stay, 62.58 mm
Over threads 68. mm

No. of threads per inch 6

Area supported by each stay 140,200 mm²ing pressure by Rules 15.65 kg/cm²

Screw stays: Material O.H. Steel

Tensile strength 41-47 kg/mm²ter { At turned off part, 31.38 mm
Over threads 35. mm

No. of threads per inch 9

Area supported by each stay 40,000 mm²

Working pressure by Rules 11.5 kg/cm² Are the stays drilled at the outer ends yes Margin stays: Diameter { At turned off part, 35.38 / 41.38 mm
or Over threads 39.- / 45.- mm
No. of threads per inch 9 Area supported by each stay 5600 60,000 mm² Working pressure by Rules 10.75 14.2 kg/cm²
Tubes: Material O.H. Steel External diameter { Plain 76.- mm / Thickness { 3.5 mm / No. of threads per inch 9
Stay 76.- mm / 7.- mm
Pitch of tubes 104 x 104 mm Working pressure by Rules 13.- kg/cm² Manhole compensation: Size of opening
shell plate 320 x 425 mm Section of compensating ring 19 x 132 mm No. of rivets and diameter of rivet holes 40, 26 mm ϕ
Outer row rivet pitch at ends 112 mm Depth of flange if manhole flanged 70 mm 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
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 pitch
of rivets in outer row in dome connection to shell
Type of Superheater 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
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 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 22 inclusive for boilers been complied with yes **DEUTSCHE WERFT**
AKTIENGESELLSCHAFT

The foregoing is a correct description,

W. G. J. Gies Manufacture

Dates of Survey { During progress of 1931 27/3, 9/4, 22/5, 3-19/6, 18-21/7, 26-29/8 Are the approved plans of boiler and superheater forwarded herewith 4/12/30
work in shops - - - (If not state date of approval.)
while building { During erection on 30/9, 18-21/10, 16-30/11, 12-16-17-19/12 Total No. of visits 18
board vessel - - -

Is this Boiler a duplicate of a previous case no If so, state Vessel's name and Report No. -

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

These Donkey Boilers have been built under Special Survey in accordance with the approved plan, the Secretary's letters and instructions thereto and the Society's Rules. The materials used in the construction are made at works recognized by the Committee and have been tested by the Society Surveyors. Workmanship and material are of good quality. The safety valves have been adjusted to 15 lb pressure. In my opinion these Donkey Boilers are eligible for notation of: DB pressure 150 lb.

Distance of washers of safety valves:

	pk.	stat.
Port boiler	<u>28.7</u> mm	<u>30.-</u> mm
Star. "	<u>30.7</u> mm	<u>30.-</u> mm

Survey Fee ... £ 16 : 2 : 0 | When applied for, 28-12- 1931
Travelling Expenses (if any) £ - : - : - | When received, 22-1- 1932 July
(See Machinery Report)

J. C. Wright
Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute Tue. 5 JAN 1932
Assigned See other J.E. Rpt.