

REPORT ON BOILERS.

No. 19582

Received at London Office

-1 NOV 1930

Date of writing Report 23rd Oct 1930 When handed in at Local Office

Port of HAMBURG

No. in Survey held at HAMBURG
Reg. Book

Date, First Survey 14th Sept, 1930 Last Survey 23rd October, 1930

(Number of Visits 5) Gross Tons Net

on the Steel Twin Sen J. H. SENIOR

Built at Emden By whom built Nordseewerke A.-G. Yard No. 173 When built 1930
Engines made at Kiel By whom made Friedr. Krupp, Germaniaerft Engine No. When made 1930
Boilers made at Hamburg By whom made Deutsche Werft A.G. Boiler No. 450/51 When made 1930
Owners Baltisch-Amerikanische Oel-Import G.m.b.H. Port belonging to Danzig

exhaust gas fired
VERTICAL DONKEY BOILER, combined with Silencer & Spark Arrestor.

Made at Hamburg By whom made Deutsche Werft A.G. Boiler No. 450/51 When made 1930 Where fixed
Manufacturers of Steel Gutehoffnungshütte AG, Oberhausen. Tubes: - Vereinigte Stahlwerke, Düsseldorf.

Total Heating Surface of Boiler 60 m² each Is forced draught fitted no Coal or Oil fired exhaust gas

No. and Description of Boilers 2 vertical, combined with Silencer & Spark Arrestor Working pressure 100 lb

Tested by hydraulic pressure to 200 lb Date of test 23rd October, 1930 No. of Certificate 527/28

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 1, 2 springs Loaded.

Area of each set of valves per boiler per rule exhaust gas fired as fitted 5655 kg/m² Pressure to which they are adjusted Are they fitted with easing gear

State whether steam from main boilers can enter the donkey boiler Smallest distance between boiler or uptake and bunkers

or woodwork Is oil fuel carried in the double bottom under boiler Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated Largest internal dia. of boiler 1600 mm Height 1696 mm

Shell plates: Material Siemens Martin Steel Tensile strength 41-47 kg/cm² Thickness 11 mm

Are the shell plates welded or flanged flanged Description of riveting: circ. seams top single row long. seams lap joint, double bottom single row

Dia. of rivet holes in circ. seams 23 mm Pitch of rivets 66.6-68.35 mm Percentage of strength of circ. seams plate 65.5-66.5% rivets 49.7-48.4% longitudinal joint plate 67.2% rivets 94.2% combined 81.6%

Working pressure of shell by rules 7.98 kg/cm² Thickness of butt straps outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Material Siemens Martin Steel

Tensile strength 41-47 kg/cm² Thickness 15 mm Radius 1600 mm Working pressure by rules 7.8 kg/cm²

Description of Furnace: Plain, spherical, or dished crown Material Tensile strength

Thickness External diameter top bottom Length as per rule Working pressure by rules

Pitch of support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Diameter of stays over thread Radius of spherical or dished furnace crown Working pressure by rule

Thickness of Ogee Ring Diameter as per rule Working pressure by rule

Combustion Chamber: Material Tensile strength Thickness of top plate

Radius if dished Working pressure by rule Thickness of back plate Diameter if circular

Length as per rule Pitch of stays Are stays fitted with nuts or riveted over

Diameter of stays over thread Working pressure of back plate by rules

Tube Plates: Material S.M. Steel Tensile strength 41-47 kg/cm² Thickness 30 mm Mean pitch of stay tubes in nests varying

If comprising shell, Dia. as per rule front back Pitch in outer vertical rows Dia. of tube holes FRONT stay plain 63.5 mm BACK stay plain

Is each alternate tube in outer vertical rows a stay tube Working pressure by rules front as approved back

Girders to combustion chamber tops: Material Tensile strength

Depth and thickness of girder at centre Length as per rule

Distance apart No. and pitch of stays in each Working pressure by rule

Crown stays: Material _____ Tensile strength _____ Diameter ^{at body of stay} or ^{over threads} _____
 No. of threads per inch _____ Area supported by each stay _____ Working pressure by rules _____
Screw stays: Material _____ Tensile strength _____ Diameter ^{at turned off part} or ^{over threads} _____ No. of threads per inch _____
 Area supported by each stay _____ Working pressure by rules _____ Are the stays drilled at the outer ends _____
Tubes: Material *Solid drawn Siemens Martin steel* External diameter ^{plain} *63.5 mm* Thickness ^{lanterne} *24 mm*
 No. of threads per inch *—* Pitch of tube *Section 33 1/4 F = 390* Working pressure by rules *13.5 kg/cm²*
Manhole Compensation: Size of opening in shell plate *300 x 400 mm* Section of compensating ring *11 x 150 mm* No. of rivets and diameter
 of rivet holes *24 x 23 mm* ϕ Outer row rivet pitch at ends *130 mm* Depth of flange if manhole flanged *—*
Uptake: External diameter *630 mm* Thickness of uptake plate *15 mm*
Cross Tubes: No. *—* External diameters *—* Thickness of plates *—*

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

Manufacturer.

Dates of Survey ^{During progress of} *1930 Sept. 14, 23 Oct. 2, 7, 23.*
^{work in shops -} *—*
^{while} *—*
^{building} ^{During erection on} *—*
^{board vessel -} *—*

Is the approved plan of boiler forwarded herewith *15/8/30*
(If not state date of approval.)

Total No. of visits *5*

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

These exhaust gas fired Donker Boilers are constructed under Special Survey in accordance with the Society's Rules, the approved plan and the Secretary's instructions thereto. The materials used in the construction are of good quality and made at works recognized by the Committee, and the workmanship is satisfactory. The Boilers were found sound and tight when tested under hydraulic pressure of 200 lb. They are eligible in my opinion to be classed in the Society's Register Book with Record of "100 lb", subject to these boilers be satisfactory, if fitted on board, examined under steam and their safety valves adjusted to 100 lb. pressure.

Survey Fee ... *4/5 £ 6 14 :* When applied for, *27. 10. 19 30*

Travelling Expenses (if any) £ *— : 16 :* When received, *27. 11. 19 30*

Committee's Minute **TUE. 5 MAY 1930**

Assigned *See F.C. Rpt.*

Engineer *P.A. Smith* to Lloyd's Register of Shipping



Lloyd's Register
Foundation