

REPORT ON BOILERS.

Bremen
No. 1935

Copy from Hamburg Rpt. 22238

Received at London Office

JUL 28 1937

Bremen 23rd July 1937

new completed Bremen

Date of writing Report 11th March 1937 When handed in at Local Office

19 Port of Hamburg & Bremen

Wesermünde 21.7.37

No. in Surrey held at HAMBURG & WESERMÜNDE
Reg. Book

Date, First Survey 8th Jan. 1937

Last Survey 18th Feb. 1937

90466 on the Single S. Vessel TAKORADIAN

(Number of Visits 10 + 4) Tons } Gross 5452
Net 3106

Built at WESERMÜNDE By whom built DESCHIMAG, WERK: SEEBECK Yard No. 572 When built 1937

Engines made at BREMEN By whom made DESCHIMAG, WERK: A.G. WESER Engine No. 140/41 When made 1937

Boilers made at HAMBURG By whom made DEUTSCHE WERFT A.G. Boiler No. 696 When made 1937

Owners ELMINA CO LTD. ACCRA Port belonging to FREETOWN

VERTICAL DONKEY BOILER.

Made at Hamburg By whom made Deutsche Werft A.G. Boiler No. 696 When made 1937 Where fixed ENGINE ROOM

Manufacturers of Steel Mem. Gusschloppnungshütte Abt. Walzwerk Oberhausen

Total Heating Surface of Boiler 23 m² Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers on Vertical Donkey Boiler Working pressure 7 kg/cm²

Tested by hydraulic pressure to 14 kg/cm² Date of test 18. 2. 37 No. of Certificate 657

Area of Firegrate in each Boiler no No. and Description of safety valves to each boiler two spring loaded

Area of each set of valves per boiler { per rule 1740 cm²
as fitted 3150 cm² Pressure to which they are adjusted 100 lbs Are they fitted with easing gear yes

State whether steam from main boilers can enter the donkey boiler no Smallest distance between boiler or uptake and bunkers

Is oil fuel carried in the double bottom under boiler no Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated no Largest internal dia. of boiler 1400 cm Height 3325 cm

Shell plates: Material P.M. Steel Tensile strength 41-47 kg/cm² Thickness 10 cm

Are the shell plates welded or flanged flanged Description of riveting: circ. seams { end single row
inter long seams two rows

Dia. of rivet holes in { circ. seams 20 cm
long seams 20 cm Pitch of rivets { 48 cm
65.5 cm Percentage of strength of circ. seams { plate 58.2%
rivets 57.4% of Longitudinal joint { plate 69.4%
rivets 84.2%
combined 81%

Working pressure of shell by rules 7.95 kg/cm² Thickness of butt straps { outer
inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat yes Material P.M. Steel

Tensile strength 41-47 kg/cm² Thickness 12 cm Radius 1120 cm Working pressure by rules 8.75 kg/cm²

Description of Furnace: Plain, spherical, or dished crown yes Material P.M. Steel Tensile strength 41-47 kg/cm²

Thickness 15 cm External diameter { top 1050 cm
bottom 1150 cm Length as per rule 1150 cm Working pressure by rules 7.85 kg/cm²

Attachment 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 15 cm Diameter as per rule { D 1400 cm
d 1150 cm Working pressure by rule 7.85 kg/cm²

Combustion Chamber: Material P.M. Steel Tensile strength 41-47 kg/cm² Thickness of top plate 15 cm

Radius if dished 1120 cm Working pressure by rule 11.1 kg/cm² Thickness of back plate 15 cm Diameter if circular 1150 cm

Length as per rule 1150 cm Pitch of stays 180 x 180 cm Are stays fitted with nuts or riveted over fitted with nuts

Diameter of stays over thread 26.17 cm Working pressure of back plate by rules 10.4 kg/cm²

Tube Plates: Material { front P.M. Steel
back P.M. Steel Tensile strength { 41-47 kg/cm²
41-47 - - Thickness { 18 cm
18 cm Mean pitch of stay tubes in nests 178/267 mm

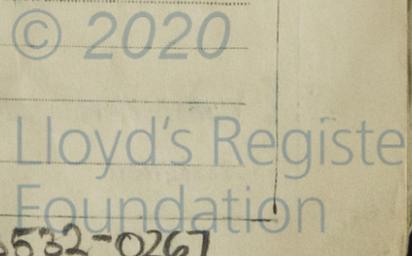
Comprising shell, Dia. as per rule { front 89 cm
back 89 cm Pitch in outer vertical rows { 89 cm
89 cm Dia. of tube holes FRONT { stay 70 cm
plain 63.5 cm BACK { stay 63.5 cm
plain 63.5 cm

Each alternate tube in outer vertical rows a stay tube Working pressure by rules { front 9.55 kg/cm²
back 9.55 - -

Stays to combustion chamber tops: Material Tensile strength

Length 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 *P. M. Steel* Tensile strength *41-47 kg/cm²* Diameter { at turned off part, *23.17* or over threads, *26.77* } No. of threads per inch *9*

Area supported by each stay *62500* Working pressure by rules *as appr.* Are the stays drilled at the outer ends

Tubes: Material *P. M. Steel* External diameter { plain *63.5* stay *70* } Thickness { *3.25* *8.00* }

No. of threads per inch *9* Pitch of tubes *89/89* Working pressure by rules *12.5 kg/cm²*

Manhole Compensation: Size of opening in shell plate *300/400* Section of compensating ring *600/700/20* No. of rivets and diam. of rivet holes *27 rivets, 20* Outer row rivet pitch at ends *135* Depth of flange if manhole flanged

Uptake: External diameter Thickness of uptake plate

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
 n/nd - - - - - Manufacture

Dates of Survey while building { During progress of work in shops - *8th/14th/20th/23rd/30th January* } Is the approved plan of boiler forwarded herewith *2. 10. 36*
 { During erection on board vessel - *1st/6th/8th/17th/18th February 1937* } (If not state date of approval.)

Total No. of visits *10 + 4*

Is this Boiler a duplicate of a previous case *yes* If so, state Vessel's name and Report No. *GAMBIAN* *B.M.N. 1525* *H.A.M. 22277*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *Material and workmanship of this vertical Donkey boiler are of good quality. The materials used in its construction are as works recognized by the Committee and tested by the Port Surveyor in accordance with the requirements of the Rules. This Donkey boiler having been made under Special Survey in conformity with the approved plan, the Surveyor's opinion and otherwise in compliance with the requirements of the Rules, is eligible in my opinion to be classed in the Port Reg. Book with the notation + DB. pressure 7 kg/cm². This Donkey Boiler has been shipped to Wessmünde where it will be fitted on board of the vessel 40572 now under construction.*

Bremen 23.7.37 This Donkey Boiler has been satisfactorily installed on board, tested under steam, and its safety valves have been correctly adjusted to 100 lbs of pressure.

Thickness of adjusting washers:
 forw. *7.5*
 aft *9.0*

A. Cantanus

Survey Fee ... *RM 84.00* } *Hamburg*
 Travelling Expenses (if any) * *5.00* } When applied for, *12th March 1937*
 When received, *13.4 1937*

sign. H. SCHLOTHAUER
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned *Sle Bremen 1935*
 FRI 6 AUG 1937

