

## REPORT ON BOILERS.

No. 13368

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Date of writing Report 12-2-1951 When handed in at Local Office 19 Port of Copenhagen

No. in Survey held at Aalborg & Odense Date, First Survey 1-3-50 Last Survey 12- - 1951  
Reg. Book

on the Motor Tanker "Charlotte Maersk" (Number of Visits 12) Gross Tons Net

Built at Odense By whom built Odense Vaalseks Værft A/S Yard No. 112 When built 1951

Engines made at Copenhagen By whom made Aht. Burmester &amp; Wain Engine No. 4511 When made 1951

Boilers made at Aalborg By whom made Aalborg Værft A/S Boiler No. 1144 When made 1951

Owners A/S D/S Svendborg &amp; D/S of 1912 A/S. Port belonging to Fredericia

## VERTICAL DONKEY BOILER.

Made at Aalborg By whom made Aalborg Værft A/S Boiler No. 1144 When made 1951 Where fixed Boiler casing

Manufacturers of Steel Vithovise Stul Melkes

Total Heating Surface of Boiler 125 m<sup>2</sup> Is forced draught fitted Coal or Oil fired Esc. GasNo. and Description of Boilers 1 off. Exhaust Gas Vertical Boiler Working pressure 12.65 kg/cm<sup>2</sup>Tested by hydraulic pressure to 22.5 kg/cm<sup>2</sup> Date of test 21-4-50 No. of Certificate 747

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2-50 mm Spring loaded

Area of each set of valves per boiler per rule as fitted 3850 mm Pressure to which they are adjusted 12.65 kg/cm<sup>2</sup> Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler in conjunction with the smallest distance between boiler or uptake and bunkers or woodwork Well clear Is oil fuel carried in the double bottom under boiler The boiler is used as a heater for oil fired boilers

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated Yes Largest internal dia. of boiler 2300 mm Height 4100 mm

Shell plates: Material S. M. Steel Tensile strength 52.8/53.0 kg/mm<sup>2</sup> Thickness 19 mm

Are the shell plates welded or flanged No Description of riveting: circ. seams end Lap double long. seams D.B.S. Tr. Riveted

Dia. of rivet holes in circ. seams 26.5 mm Pitch of rivets 85 mm Percentage of strength of circ. seams plate 68.8 rivets 52.3 of Longitudinal joint plate 82.8 rivets 135.0 combined 92.6

Working pressure of shell by rules 14.15 kg/cm<sup>2</sup> Thickness of butt straps outer 19 mm inner 19 mm

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

Tensile strength 42.7/46.8 kg/mm<sup>2</sup> Thickness 22.0 mm Radius 3260 mm Working pressure by rules 12.9 kg/cm<sup>2</sup>

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 D a 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 45.4/46.7 kg/mm<sup>2</sup> Thickness 22.0 mm Mean pitch of stay tubes in nests 180 x 311.8 mm

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

Is each alternate tube in outer vertical rows a stay tube Working pressure by rules 10P 12.95 kg/cm<sup>2</sup> 10P 12.95 kg/cm<sup>2</sup>

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 *S. M. Steel* Tensile strength *44.6/500 Kg/mm<sup>2</sup>* Diameter { at body of stay, *10 mm* or over threads..... }  
No. of threads per inch *9* Area supported by each stay *4909 cm<sup>2</sup>* Working pressure by rules *App.*

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 *S. M. Steel* External diameter { plain *63.5 mm* ✓ stay *63.5 mm* ✓ } Thickness { *3.65 mm* ✓ *8.0 mm* ✓ }  
No. of threads per inch *9* ✓ Pitch of tubes *90 mm* Working pressure by rules *Approved*

Manhole Compensation: Size of opening in shell plate *300 x 400 mm* Section of compensating ring *270 x 22 mm* No. of rivets and diameter of rivet holes *30 @ 26.5 mm* Outer row rivet pitch at ends *150 mm* Depth of flange if manhole flanged *-*

Uptake: External diameter *-* Thickness of uptake plate *-*

Cross Tubes: No. *2* ✓ External diameters { *528 mm* ✓ *528 mm* ✓ } Thickness of plates *14 mm* ✓

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *Yes* ✓

The foregoing is a correct description,

*J. Schumann*

Manufacturer.

Dates of Survey { During progress of work in shops - *1/3/50 - 2/4/50* } Is the approved plan of boiler forwarded herewith *7-7-49* (If not state date of approval.)  
while building { During erection on board vessel - *25/10/50 12/1/51* } Total No. of visits *12*

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

*This boiler has been constructed under special survey in accordance with the Rules and approved plans also Secretary's Letter*

*The material has been tested as required by the rules of this Society and the workmanship is good*

*The boiler has been satisfactorily installed on board the vessel and examined under full working conditions.*

Survey Fee ... *£ 400:* : When applied for, *17/2* 19 *51*  
Travelling Expenses (if any) *£ 53:* : When received, 19 .....

*N. Russell*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

*See F.E. ncky. rpt.*

TUES. 13 MAR 1951

Lloyd's Register Foundation