

# REPORT ON BOILERS.

No. 4080

Received at London Office 30 JUN 1941

Date of writing Report

10

When handed in at Local Office

10

Port of

GALVESTON

No. in Reg. Book

Survey held at Hamburg

Date, First Survey

Last Survey

17/4 1941

(Number of Visits)

Gross 10044  
Net 5786

33569 on the Steam S.S. "MIT. SCANDINAVIA"

Master

Built at Hamburg

By whom built

Deutsche-Werft A.G. Card No. 231 When built 1939

Engines made at

Augsburg

By whom made

M.A.N.

Engine No.

When made 1939

Boilers made at

Hamburg

By whom made

Deutsche Werft A.G.

Boiler No.

836 When made 1939

Nominal Horse Power

1170

Owners

The Lescaux Co (Norway) R/S Port belonging to

Oslo

## MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY.

Welded or Cast Steel tested as required by Rules

Manufacturers of Steel

(Letter for Record "S")

Total Heating Surface of Boilers 400 m<sup>2</sup>

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

2 S.B.

Working Pressure

12 Kg/cm<sup>2</sup> = 171 lbs

Tested by hydraulic pressure to

21.5 Kg

Date of test

24-10-39

No. of Certificate

758

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One double sprung loaded

Area of each set of valves per boiler

per Rule 9340 mm<sup>2</sup>  
as fitted 11349

Pressure to which they are adjusted

171 lbs Are they fitted with easing gear

Yes

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

Boilers in  
Lower Dks

Smallest distance between boilers or uptakes and bunkers or woodwork

1120 mm

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

4100 mm

Length

2300 mm

Shell plates: Material

Steel

Tensile strength

47.53 Kg/mm<sup>2</sup>

Thickness

25.5 mm

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R. lap.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 29 mm  
long. seams 29 u

Pitch of rivets

92.7 mm  
185 mm

Percentage of strength of circ. end seams

plate rivets

Percentage of strength of circ. intermediate seam

plate rivets

Percentage of strength of longitudinal joint

plate rivets combined

Working pressure of shell by Rules

Thickness of butt straps

outer 25.5 mm  
inner 25.5 mm

No. and Description of Furnaces in each Boiler

3 mowson

Material

OH Steel

Tensile strength

41-47 Kg/mm<sup>2</sup>

Smallest outside diameter

974 mm

Length of plain part

top bottom

Thickness of plates

crown 12 mm  
bottom

Description of longitudinal joint

lap welded

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

Working pressure of furnace by Rules

End plates in steam space: Material

OH Steel

Tensile strength

41-47 Kg/mm<sup>2</sup>

Thickness

24 mm

Pitch of stays

460 x 400 mm

How are stays secured

Double nuts & riveted washers - upper row  
" " " doublers - lower

Working pressure by Rules

Tube plates: Material

front OH Steel  
back

Tensile strength

41-47 Kg/mm<sup>2</sup>

Thickness

24 mm  
22 mm

Mean pitch of stay tubes in nests

208 x 208 mm

Pitch across wide water spaces

360 mm

Working pressure

front back

Girders to combustion chamber tops: Material

OH Steel

Tensile strength

47-53 Kg/mm<sup>2</sup>

Depth and thickness of girder

at centre

in each

2 @ 210 mm

Working pressure by Rules

Combustion chamber plates: Material

S.M. Steel

Tensile strength

41-47 Kg/mm<sup>2</sup>

Thickness: Sides

16.5 mm

Back

19 mm

Top

16.5 mm

Bottom

24 mm

Pitch of stays to ditto: Sides

210 x 200 mm

Back

200 x 208 mm

Top

210 x 200 mm

Are stays fitted with nuts or riveted over

riveted

Working pressure by Rules

Front plate at bottom: Material

Tensile strength

Thickness

24 mm

Lower back plate: Material

OH Steel

Tensile strength

41-47 Kg/mm<sup>2</sup>

Thickness

24 mm

Pitch of stays at wide water space

360 mm

Are stays fitted with nuts or riveted over

nuts

Working Pressure

Main stays: Material

OH Steel

Tensile strength 41-47 Kg/mm<sup>2</sup>

Diameter

At body of stay, 72 mm

or Over threads 72 mm

No. of threads per inch

6 Area supported by each stay

Working pressure by Rules

Screw stays: Material

OH Steel

Tensile strength 41-47 Kg/mm<sup>2</sup>

Diameter

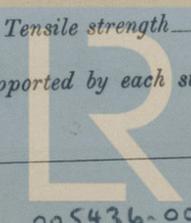
At turned off part, 35.38 mm

or Over threads 39.0 mm

No. of threads per inch

9

Area supported by each stay



Lloyd's Register Foundation

Working pressure by Rules \_\_\_\_\_ Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 38.38 mm. or Over threads 42 mm.

No. of threads per inch 9 Area supported by each stay - Working pressure by Rules \_\_\_\_\_

Tubes: Material OH Steel External diameter { Plain 76 Stay 76 Thickness { 3.75 mm 8.11 mm No. of threads per inch 9

Pitch of tubes 104 x 104 mm. Working pressure by Rules \_\_\_\_\_ Manhole compensation: Size of opening in shell plate 320 x 425 mm. Section of compensating ring 265 x 2 x 25.5 mm. No. of rivets and diameter of rivet holes 28 @ 29 mm.

Outer row rivet pitch at ends 175 mm Depth of flange if manhole flanged - Steam Dome: Material OH Steel oxy acetylene weld & riveted

Tensile strength 41-47 kg/cm<sup>2</sup> Thickness of shell 14 mm. Description of longitudinal joint riveted butt straps.

Diameter of rivet holes 26 mm. Pitch of rivets 84 mm. Percentage of strength of joint { Plate Rivets

Internal diameter 900 mm Working pressure by Rules \_\_\_\_\_ Thickness of crown 16 mm No. and diameter of stays none Inner radius of crown 420 mm Working pressure by Rules \_\_\_\_\_

How connected to shell riveted angle Size of doubling plate under dome of manhole Doubling only in way Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 29 mm @ 200 mm.

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 and 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 per 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 \_\_\_\_\_

The foregoing is a correct description, \_\_\_\_\_

Manufacturer. \_\_\_\_\_

Dates of Survey { During progress of work in shops - - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

{ During erection on board vessel - - - } Total No. of visits \_\_\_\_\_

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Uruva Granada" Ham. Rpt 2

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

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Galveston, Apr. 1941 These boilers have been efficiently installed & fixed in the vessel, generally examined, and particulars so far as seen found in accordance with this form & in accordance with the rules. Workmanship & materials as seen are satisfactory. Safety valves observed lifting at working pressure.

Survey Fee ... .. £ : : When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

Committee's Minute \_\_\_\_\_ TUE. 29 JUL 1941

Assigned See Gal. J.E. 4080

Engineer Surveyor to Lloyd's Register of Shipping. Jim Kennel (Galv.)

