

## REPORT ON BOILERS.

No. 15761

2 NOV 1926

Received at London Office

Date of writing Report 27 Oct 1927 When handed in at Local Office

192

Port of Rotterdam

No. in Survey held at Rotterdam

Date, First Survey 16 Dec. 25 Last Survey 20 Oct. 1926

Reg. Book.

on the

SS "Huan Yman"

(Number of Visits 12.)

Gross

Tons

Net

Master Built at Rotterdam By whom built Melton's Eng &amp; Ship Comp. No. 311 When built 1926

Engines made at Rotterdam By whom made Melton's Eng &amp; Ship Comp. Engine No. 425 When made 1926

Boilers made at Rotterdam By whom made Melton's Eng &amp; Ship Comp. Boiler No. 723-724 When made 1926

Nominal Horse Power 200 Owners Ou Hong Heam Sugarworks Port belonging to Singapore

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

(Letter for Record)

Total Heating Surface of Boilers 3570  $\text{ft}^2$  Is forced draught fitted No Coal or Oil fired CoalNo. and Description of Boilers 2 Single ended multitubular Marine Working Pressure 180  $\text{lb}$ Tested by hydraulic pressure to 320  $\text{lb}$  Date of test 19-7-26 No. of Certificate 842 Can each boiler be worked separately YesArea of Firegrate in each Boiler 53.5  $\text{ft}^2$  No. and Description of safety valves to each boiler 2 Spring loadedArea of each set of valves per boiler {per Rule 10.06 as fitted 1105-3  $\frac{3}{4}$  Pressure to which they are adjusted 100  $\text{lb}$  Are they fitted with easing gear Yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork over 2 feet Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 1 foot Is the bottom of the boiler insulated No

Largest internal dia. of boilers 13'6" Length 10'6" Shell plates: Material S.M. steel Tensile strength 20-32 tons

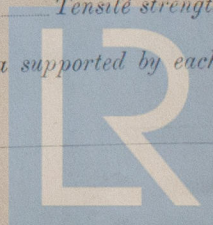
Thickness 1  $\frac{3}{32}$ " Are the shell plates welded or flanged Description of riveting: circ. seams {end lap double worked inter.}Long. seams Double butt 3xw Diameter of rivet holes in {circ. seams 1  $\frac{3}{16}$ " long. seams 1  $\frac{3}{16}$ " Pitch of rivets {3  $\frac{1}{2}$ " 4  $\frac{1}{8}$ "}

Percentage of strength of circ. end seams {plate 66% rivets 45% Percentage of strength of circ. intermediate seam {plate rivets}

Percentage of strength of longitudinal joint {plate 84.9% rivets 99.4% combined 89.0% Working pressure of shell by Rules 105  $\text{lb}$ Thickness of butt straps {outer 1  $\frac{1}{16}$ " inner 1  $\frac{1}{16}$ " No. and Description of Furnaces in each Boiler 3 Monson patentMaterial S.M. steel Tensile strength 27-30 tons Smallest outside diameter 3'1  $\frac{5}{8}$ "Length of plain part {top bottom Thickness of plates {crown 1  $\frac{1}{2}$ " bottom 1  $\frac{1}{2}$ " Description of longitudinal joint WeldedDimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 191  $\text{lb}$ End plates in steam space: Material S.M. steel Tensile strength 29 tons Thickness 1  $\frac{1}{32}$ " Pitch of stays 17" x 20"How are stays secured Thread in plates nuts outside Working pressure by Rules 100.2  $\text{lb}$ Tube plates: Material {front S.M. steel back S.M. steel Tensile strength {27-30 tons Thickness {3  $\frac{1}{32}$ " 3  $\frac{1}{4}$ "}Mean pitch of stay tubes in nests 13'0" x 0  $\frac{3}{4}$ " Pitch across wide water spaces 14  $\frac{1}{2}$ " Working pressure {front 294  $\text{lb}$  back 252  $\text{lb}$ 

Girders to combustion chamber tops: Material S.M. steel Tensile strength 20-32 tons Depth and thickness of girder

at centre 2 x 8" x 10" Length as per Rule 8'5" Distance apart 9" No. and pitch of stays

in each 3 x 7  $\frac{1}{4}$ " Working pressure by Rules 234  $\text{lb}$  Combustion chamber plates: Material S.M. steelTensile strength 27-30 tons Thickness: Sides 2  $\frac{3}{32}$ " Back 1  $\frac{1}{16}$ " Top 2  $\frac{3}{32}$ " Bottom 2  $\frac{3}{32}$ "Pitch of stays to ditto: Sides 7  $\frac{1}{4}$ " x 0  $\frac{1}{4}$ " Back 7  $\frac{1}{4}$ " x 0  $\frac{1}{16}$ " Top 7  $\frac{1}{4}$ " x 9  $\frac{1}{16}$ " Are stays fitted with nuts or riveted over worked overWorking pressure by Rules 200  $\text{lb}$  Front plate at bottom: Material S.M. steel Tensile strength 27-30 tonsThickness 3  $\frac{1}{32}$ " Lower back plate: Material S.M. steel Tensile strength 27-30 tons Thickness 2  $\frac{3}{32}$ "Pitch of stays at wide water space 13  $\frac{1}{2}$ " Are stays fitted with nuts or riveted over worked over and outer completed with nutsWorking Pressure 190  $\text{lb}$  Main stays: Material S.M. steel Tensile strength 20-32 tonsDiameter {At body of stay, 2  $\frac{3}{4}$ " No. of threads per inch 7 Area supported by each stay 340  $\text{ft}^2$ Working pressure by Rules 197  $\text{lb}$  Screw stays: Material S.M. steel Tensile strength 27-30 tonsDiameter {At turned off part, 1  $\frac{1}{2}$ " No. of threads per inch 10 Area supported by each stay 6344  $\text{ft}^2$ Lloyd's Register  
W1233-0035



Working pressure by Rules *197* Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part, *1 3/4* Over threads *1 3/4* Working pressure by Rules *215*

No. of threads per inch *10* Area supported by each stay *0.65*

Tubes: Material *St. steel* External diameter { Plain *3 1/4* Stay *3 1/4* Thickness *5/16* No. of threads per inch *9*

Pitch of tubes *4 3/8* Working pressure by Rules *190* Manhole compensation: Size of opening in shell plate *15" x 19"* Section of compensating ring *2' 8 1/2" x 1' 3 1/2"* No. of rivets and diameter of rivet holes *30 at 1 3/16"*

Outer row rivet pitch at ends *4 7/8* Depth of flange if manhole flanged *ring flanged* Steam Dome: Material *—*

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 of stays *—*

How connected to shell *—* Inner radius of crown *—* Working pressure by Rules *—*

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 and the boiler be worked separately *—*

Area of each safety valve *—* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *—*

Rules *—* Are the safety valves fitted with easing gear *—* Working pressure as per Rules *—*

tubes *—* Pressure to which the safety valves are adjusted *—* Hydraulic test pressure: *—*

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 23 inclusive for boilers been complied with *Yes*.

The foregoing is a correct description,

*J. D. Wilson* Manufacturer.

Dates of Survey { During progress of work in shops - *16-22 Dec. 1925; 10 Jan* Are the approved plans of boiler and superheater forwarded herewith *1-6-20*

while building { During erection on board vessel - *17 Feb; 13-22 March; 17 April; 27 May; 7-16-20 July and 20 October 1926* (If not state date of approval.)

Total No. of visits *12*

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

*These Boilers have been made under Special Survey in accordance with the Society's Rules. Secretary's letters and approved plans material tested as required and workmanship good. Boilers tested as required by the rules and found sound and tight.*

Survey Fee ... *On Machinery report* When applied for, 192

Travelling Expenses (if any) £ *—* When received, 192

Committee's Minute *TUES. 9 NOV 1926*

Assigned *See J. E. rpt. attached*

*Y. May* Engineer-Surveyor to Lloyd's Register of Shipping.



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