

## REPORT ON BOILERS.

No. 4231.

Received at London Office

20 NOV 1928

Date of writing Report 15<sup>th</sup> October 1928 When handed in at Local Office

192

Port of YOKOHAMA

No. in Survey held at Uraga Reg. Book.

Date, First Survey 14<sup>th</sup> MayLast Survey 11<sup>th</sup> October 1928

on the

Steel Ss "CANTON MARU"

(Number of Visits 17)

Gross 2811.32  
Tons Net 1613.75

Master Built at Uraga By whom built Uraga Dock Co. Ltd. Yard No. 329 When built 1928  
 Engines made at Uraga By whom made Uraga Dock Co. Ltd. Engine No. 329 When made 1928  
 Boilers made at Uraga By whom made Uraga Dock Co. Ltd. Boiler No. 329 When made 1928  
 Horse Power 435 Owners Osaka Shosen Kaisha Port belonging to Osaka

TITUBULAR BOILERS—MAIN, ~~AUXILIARY, OR DONKEY.~~

Manufacturers of Steel Messrs Gutehoffnungshütte Oberhausen Aktiengesellschaft, Oberhausen (Letter for Record (S))  
 Heating Surface of Boilers 6843 sq. ft. Is forced draught fitted Yes Coal or Oil fired Coal  
 Description of Boilers 3 Single Ended Working Pressure 200 lb.  
 Hydraulic pressure to 400 lb. Date of test 21.8.28 23.8.28 No. of Certificate 14.15.16 Can each boiler be worked separately Yes  
 Firegrate in each Boiler 58 sq. ft. No. and Description of safety valves to each boiler 2 Spring loaded.  
 each set of valves per boiler {per Rule 13.26 sq. ins. as fitted 16.5 sq. ins. Pressure to which they are adjusted 205 lb. Are they fitted with easing gear Yes  
 If donkey boilers, state whether steam from main boilers can enter the donkey boiler  
 distance between boilers or uptakes and bunkers or woodwork 18" Is oil fuel carried in the double bottom under boilers No  
 distance between shell of boiler and tank top plating 18 1/4" Is the bottom of the boiler insulated Yes  
 internal dia. of boilers 14' 3" Length 12' 0" Shell plates: Material Mild steel Tensile strength 28-35 tons  
 1.3125" Are the shell plates welded or flanged Yes Description of riveting: circ. seams {end Double riveted lap. inter. 4"  
 Double butt strap Diameter of rivet holes in {circ. seams 1.375" Pitch of rivets {4"  
 {long. seams 1.375" 9 1/2"  
 e of strength of circ. end seams {plate 65.4% Percentage of strength of circ. intermediate seam {plate  
 {rivets 46.6% rivets  
 e of strength of longitudinal joint {plate 85.53% Working pressure of shell by Rules 203 lb.  
 {rivets 91.76%  
 {combined 89.47%  
 of butt straps {outer 1" No. and Description of Furnaces in each Boiler 3 Morrison's Suspension 3 cf.  
 {inner 1.125" mild steel Tensile strength 26-30 tons Smallest outside diameter 3' 7 1/4"  
 plain part {top Thickness of plates {crown .625" Description of longitudinal joint  
 {bottom  
 of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 211 lb.  
 s in steam space: Material Mild steel Tensile strength 26-30 tons Thickness 1.3125" Pitch of stays 20"  
 stays secured Through plates, nuts on each side Working pressure by Rules 206 lb.  
 s: Material {front Mild steel Tensile strength {26-30 tons Thickness {8 7/8"  
 {back mild steel 26-30 tons .75"  
 of stay tubes in nests 9.695" Pitch across wide water spaces 13.5" Working pressure {front 240 lb.  
 {back 214 lb.  
 combustion chamber tops: Material Mild steel Tensile strength 28-35 tons Depth and thickness of girder  
 10.5" x 8 7/8" Length as per Rule 33.56" Distance apart 11.375" No. and pitch of stays  
 8" x 8" Working pressure by Rules 234 lb. Combustion chamber plates: Material Mild steel  
 length 26-30 tons Thickness: Sides .75" Back .6875" Top .75" Bottom .875"  
 ys to ditto: Sides 9" x 11" Back 8.33" x 9.25" Top 8" x 11.375" Are stays fitted with nuts or riveted over nuts  
 pressure by Rules 205 lb. Front plate at bottom: Material mild steel Tensile strength 26-30 tons  
 .875" Lower back plate: Material mild steel Tensile strength 26-30 tons Thickness .875"  
 ys at wide water space 14" x 9 1/4" Are stays fitted with nuts or riveted over nuts  
 pressure 222 lb. Main stays: Material mild steel Tensile strength 28-35 tons  
 body of stay, 3.125" No. of threads per inch 6 Area supported by each stay 380 sq. ins.  
 or threads  
 pressure by Rules 224 lb. Screw stays: Material mild steel Tensile strength 26-30 tons  
 turned off part, 1.48" No. of threads per inch 9 Area supported by each stay 77.05 sq. ins.

W1270-0130



Working pressure by Rules 235 lb. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1.6" or Over threads  
No. of threads per inch 9 Area supported by each stay 94.5 sq ins. Working pressure by Rules 226 lb.  
Tubes: Material Wrought Iron External diameter { Plain 3" Thickness { 8 B.W.G. No. of threads per inch 9  
Stay 3" Pitch of tubes 4.25" x 4.125" Working pressure by Rules 250 lb. Manhole compensation: Size of opening in  
shell plate 21.5" x 11 1/2" Section of compensating ring 25.15 sq ins. No. of rivets and diameter of rivet holes 36 x 1.4375"  
Outer row rivet pitch at ends 9 1/2" Depth of flange if manhole flanged 3.125" Steam Dome: Material Nil.  
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 ☒ Inner radius of crown ☒ Working pressure by Rules ☒  
How connected to shell ☒ 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 Nil. 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 23 inclusive for boilers been complied with Yes.

The foregoing is a correct description,

Alfred for H.D.C. Manufacturer.

Dates of Survey { During progress of work in shops - May 14<sup>th</sup> June 25<sup>th</sup> July 11<sup>th</sup> 25<sup>th</sup> Aug 8<sup>th</sup> 10<sup>th</sup> Are the approved plans of boiler and superheater forwarded herewith No.  
while building { During erection on board vessel - Sept 1<sup>st</sup> 14<sup>th</sup> 17<sup>th</sup> Oct 2<sup>nd</sup> 6<sup>th</sup> 11<sup>th</sup> (If not state date of approval.) 22-10-27 Kobe.  
Total No. of visits 17

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

The boilers of this vessel have been constructed and installed in accordance with the Society's Rules and the approved plans for a working pressure of 200 lb. The materials and workmanship have been found good. The boilers are eligible in my opinion to be classed in the Register Book with record of + L M C 10.28.

Survey Fee ... .. £ See Machinery Report When applied for, 192  
Travelling Expenses (if any) £ Report When received, 192

F. Brooke Smith

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 27 NOV 1928

Assigned See Minute on YKa Rpt. 4231 attached



© 2020

Lloyd's Register  
Foundation