

REPORT ON BOILERS.

No. 5051.

Received at London Office

-1 FEB 1926

Date of writing Report *7th Nov 1925* When handed in at Local Office *10* Port of *Kobe*

No. in Survey held at *OSAKA* Date, First Survey *14th MAY 1918* Last Survey *OCT 30th 1925*

Reg. Book. on the *S.S. "ITIYO MARU"* (Number of Visits *SEE MACHY RPT*) Gross *4273.5* Tons Net

Master Built at *OSAKA* By whom built *OSAKA IRON WORKS LTD* When built *1925*

Engines made at *FINSPOONG* By whom made *SVENSKA TURBIN FABRIKS A.B. LUNGSTROM* When made *1918*

Boilers made at *OSAKA* By whom made *OSAKA IRON WORKS LTD* When made *1920*

Registered Horse Power *562 HP.* Owners *Do Do* Port belonging to *TAKASAGO*

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~ ^{CENTER & PORT}—Manufacturers of Steel *Mitsui steel, Ord. Co. & Yawata Steel Co.*

(Letter for record *S*) Total Heating Surface of Boilers *4348.6* sq ft Is forced draft fitted *YES* No. and Description of Boilers *2 SE MULTITUBULAR* Working Pressure *230* LBS Tested by hydraulic pressure to *460* LBS Date of test *2.10.19. 2.30.19.*

No. of Certificate *✓* Can each boiler be worked separately *YES* Area of fire grate in each boiler *49.5* sq ft No. and Description of safety valves to each boiler *2 SPRING LOADED* Area of each valve *5.94* sq in Pressure to which they are adjusted *233* lbs

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 *18* in Mean dia. of boilers *13'-6"* Length *12'-0"*

Material of shell plates *O.H. STEEL* Thickness *1 7/16* Range of tensile strength *26.79 MIN.* Are the shell plates welded or flanged *No*

Descrip. of riveting: cir. seams *D.R. LAP* long. seams *T.R.O.B.S.* Diameter of rivet holes in long. seams *1 7/16* Pitch of rivets *9 3/4*

Lap of plates or width of butt straps *2 1/4* Per centages of strength of longitudinal joint rivets *86.2* Working pressure of shell by rules *233.4* Size of manhole in shell *21 x 17* Size of compensating ring *11 x 1 7/16* No. and Description of Furnaces in each boiler *3 BRIGHTON.* Material *O.H. STEEL* Outside diameter *3'-4 1/4* Length of plain part top *✓* Thickness of plates crown *2 1/16* bottom *3/16*

Description of longitudinal joint *WELD* No. of strengthening rings *✓* Working pressure of furnace by the rules *265* Combustion chamber plates: Material *O.H. STEEL* Thickness: Sides *23* Back *32* CENTER *23* Pitch of stays to ditto: Sides *8 1/4 x 8 1/2* Back *8 1/4 x 8 1/2*

Top *8 x 8 3/4* If stays are fitted with nuts or riveted heads *NUTS.* Working pressure by rules *240* Material of stays *O.H. STEEL* Area at smallest part *2-10* Area supported by each stay *72-20* Working pressure by rules *262* End plates in steam space: Material *O.H. STEEL* Thickness *1 1/32*

Pitch of stays *20 x 18 1/2* How are stays secured *DN&R.W.* Working pressure by rules *250* Material of stays *O.H. STEEL* Area at smallest part *10-12 0*

Area supported by each stay *370* Working pressure by rules *284* Material of Front plates at bottom *O.H. STEEL* Thickness *1 5/16* Material of Lower back plate *O.H. STEEL* Thickness *1 5/16* Greatest pitch of stays *15 1/4 x 8 1/4* Working pressure of plate by rules *240* Diameter of tubes *3 1/4*

Pitch of tubes *4 1/2 x 4 3/8* Material of tube plates *O.H. STEEL* Thickness: Front *1 5/16* Back *7/8* Mean pitch of stays *8 7/8* Pitch across wide water spaces *14 1/2 WITH 3 O.B.L.R.* Working pressures by rules *322* Girders to Chamber tops: Material *O.H. STEEL* Depth and thickness of girder at centre *10 1/2 x 1 5/16 x 2* Length as per rule *2'-10 7/16* Distance apart *8 3/4* Number and pitch of Stays in each *3 @ 8*

Working pressure by rules *302* Steam dome: description of joint to shell *✓* % of strength of joint *✓*

Diameter *✓* Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *✓* Diam. of rivet holes *✓*

Pitch of rivets *✓* Working pressure of shell by rules *✓* Crown plates *✓* Thickness *✓* How stayed *✓*

SUPERHEATER. Type *SCHMIDT.* Date of Approval of Plan *SIMILAR TO ANDES & ALPS MARU* Tested by Hydraulic Pressure to *690* LBS.

Date of Test *29/5/25* & *8/6/25* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *YES*

Diameter of Safety Valve *2* Pressure to which each is adjusted *235* LBS Is Easing Gear fitted *YES*



The foregoing is a correct description,
A. J. Puse Manufacturer.

Dates of Survey *work in shops - -* As Con: N° 919 FROM MAY 1918 TO NOV. 1919 Is the approved plan of boiler forwarded herewith *YES*

while building (During erection on board vessel - -) FOR REMAINDER SEE MACHINERY REPORT Total No. of visits

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

These two boilers were constructed according to the Rules & approved plans. The material were tested, found efficient & the workmanship is good. They have now been efficiently installed on board & tested under steam with satisfactory results.

These two Boilers were completed in 1919 & were used for a short time during experimental tests with S.T.A.L. Turbine.

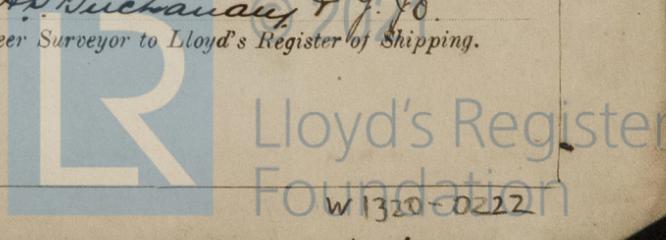
Survey Fee ... £ ... When applied for, ... 19

Travelling Expenses (if any) £ *SEE MACHY RPT.* : : When received, ... 19

Committee's Minute *FRI. 5 FEB 1926*

Assigned *See other Rpt*

H. D. Buchanan & Co.
Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register of Shipping
Foundation
W 1320-0222