

REPORT ON MACHINERY.

Received at London Office

SAT JUL 3 1920

Date of writing Report 27-5-1920 When handed in at Local Office 10 Port of Yokohama

No. in Survey held at Yokohama Date, First Survey 12-7-19 Last Survey 19th May, 1920.
 Reg. Book. on the Steel S.S. "Sapporo Maru No.8" Yard No.8. (Number of Visits 32)

Master Built at Yokohama By whom built Uchida S. B & E Co When built 1920.

Engines made at Yokohama By whom made Uchida S. B & E Co when made 1920.

Boilers made at Kanagawa (Yka) By whom made Uchida S. B & E Co when made 1920.

Registered Horse Power Owners Inugami Steamship Coy Port belonging to Yokohama

Nom. Horse Power as per Section 28 190 2/6 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Reciprocating No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 19 x 31 1/2 x 52 Length of Stroke 39 Revs. per minute 68 Dia. of Screw shaft as per rule 11.39 Material of screw shaft S
as fitted 12

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight in the propeller boss Yes If the liner is in more than one length are the joints burned X If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive XX If two liners are fitted, is the shaft lapped or protected between the liners XXX Length of stern bush 48 1/2

Dia. of Tunnel shaft as per rule 9.9 Dia. of Crank shaft journals as per rule 10.4 Dia. of Crank pin 10 3/4 Size of Crank webs 6 1/2 x 20 x 38 1/2
as fitted 10 as fitted 10 Dia. of thrust shaft under collars 10 1/2 Dia. of screw 1 1/4 - 2" Pitch of Screw 16' - 3" No. of Blades 4 State whether moveable No Total surface 81 sq ft

No. of Feed pumps 2 Diameter of ditto 4 Stroke 19 1/2 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 Stroke 19 1/2 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps 1-6x8x18 1-7x9x9 1-5 1/2 x 3 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2-3" In Holds, &c. F.P. 1-3, Fore Hold 2-3, After Hold 2-3, A.P. 1-3"

No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 1-3"

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

What pipes are carried through the bunkers XX How are they protected XX

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top of Engineroom

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel Carnegie Steel Co

Total Heating Surface of Boilers 3019.52 Is Forced Draft fitted Yes No. and Description of Boilers 2 Scotch Marine Type 2SB

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 31-3-20 No. of Certificate 109

Can each boiler be worked separately Yes Area of fire grate in each boiler 40.5 No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 7.07 Pressure to which they are adjusted 180 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork XX Mean dia. of boilers 11'-6" Length 11'-3" Material of shell plates S

Thickness 1" Range of tensile strength 26 to 32 T Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.L. long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 16 3/4

Per centages of strength of longitudinal joint ribs 96.9 Working pressure of shell by rules 191 Size of manhole in shell 12 x 16
plate 86

Size of compensating ring X No. and Description of Furnaces in each boiler 2 Morison O.S. Material S Outside diameter 44 5/8

Length of plain part top X Thickness of plates crown 5/8 Description of longitudinal joint Welded No. of strengthening rings X
bottom X bottom 5/8

Working pressure of furnace by the rules 225 Combustion chamber plates: Material S Thickness: Sides 5/8 Back 3/4 Top 3/4 Bottom 3/4

Pitch of stays to ditto: Sides 8 1/2 x 8 Back 8 3/8 x 8 Top 8 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads D.Nuts Working pressure by rules 196

Material of stays S Area at smallest part 1.79 Area supported by each stay 68.3 Working pressure by rules 286 End plates in steam space: Material S Thickness 1" Pitch of stays 16 3/4 x 15 How are stays secured D.Nuts Working pressure by rules 188 Material of stays S

Area at smallest part 5.38 Area supported by each stay 251.25 Working pressure by rules 221 Material of Front plates at bottom S

Thickness 3/4 Material of Lower back plate S Thickness 3/4 Greatest pitch of stays 18 x 8 1/2 Working pressure of plate by rules 196

Diameter of tubes 3 Pitch of tubes 4 x 4 Material of tube plates S Thickness: Front 3/4 Back 3/4 Mean pitch of stays 8

Pitch across wide water spaces 13 3/4 Working pressures by rules 214 Girders to Chamber tops: Material S Depth and thickness of girder at centre 7 1/2 x 1 1/2 Length as per rule 28 Distance apart 8 1/4 Number and pitch of stays in each 2 at 8 1/2

Working pressure by rules 199.6 Steam dome: description of joint to shell XX % of strength of joint XX

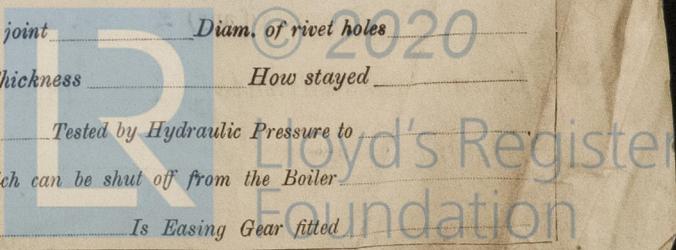
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

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

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted



REPORT ON MACHINERY.

IS A DONKEY BOILER FITTED? No Yes. If so, is a report now forwarded? Yes No

SPARE GEAR. State the articles supplied:—
 2 each connecting rod top and bottom end bolts nuts and brasses, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed and bilge pump valves, 1 set of piston rings, complete for each engine quantity assorted bolts and nuts and steel plates, 1 valve spindle for each engine, 1 set of eccentric rods, 2 safety valve springs, 3 set of air pump valves, 1 circulating pump impeller, 1 set of valves, seats, and springs for Auxiliary pumps.

The foregoing is a correct description,

J. La Plata Manufacturer.

Dates of Survey while building: During progress of work in shops -- July 12, Aug 25, Sept 10, 13, 18, 22, 30, Oct 6, 10, 13, 18, 22, Nov 27, Dec 18, Jan 13, 18, Feb 6, 19, Mar 4, 15, 27, Apr 5, 7, 13, 28, May 4, 7, 10, 12, 14, 17, 19.
 During erection on board vessel --
 Total No. of visits 32. Is the approved plan of main boiler forwarded herewith Yes No

Dates of Examination of principal parts—Cylinders 12-7-19 Slides 25-8-19 Covers 12-7-19 Pistons 18-9-19 Rods 18-9-19
 Connecting rods 18-9-19 Crank shaft 15-1-20 Thrust shaft 13-1-20 Tunnel shafts 19-2-20 Screw shaft 19-2-20 Propeller 19-2-20
 Stern tube 19-2-20 Steam pipes tested 13-4-20 Engine and boiler seatings 27-3-20 Engines holding down bolts 28-4-20
 Completion of pumping arrangements 4-5-20 Boilers fixed 4-5-20 Engines tried under steam 10-5-20
 Completion of fitting sea connections 4-5-20 Stern tube 4-5-20 Screw shaft and propeller 4-5-20
 Main boiler safety valves adjusted 10-5-20 Thickness of adjusting washers Lock nuts.
 Material of Crank shaft S Identification Mark on Do. F.G.A. Material of Thrust shaft S Identification Mark on Do. F.G.A.
 Material of Tunnel shafts S Identification Marks on Do. R.O.B. Material of Screw shafts S Identification Marks on Do. R.O.B.
 Material of Steam Pipes Steel Test pressure 600
 Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150° F.
 Have the requirements of Section 49 of the Rules been complied with
 Is this machinery duplicate of a previous case No. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery and boilers of this vessel were constructed under special survey of materials tested to Rule Requirements and workmanship was found sound throughout, On completion the machinery was thoroughly tested under working condition with satisfactory result, In the opinion of the undersigned the machinery is eligible to be classed in the Register Book LMC 5-20 and notation Electric Light.

It is submitted that
 this vessel is eligible for
THE RECORD. + LMC 5. 20. F.D.

J.W.D.
 20/7/20.
L. Anshelod
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee	£ 30:00	When applied for,
Special	£ 498:00	15-5-1920
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any)	£ 29:00	17-5-1920.

Committee's Minute FRI. JUL. 23 1920
 Assigned **MACHINERY DEPT. WRITTEN** + LMC 5. 20 F.D.

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 TUE JUL 5 1921
 Lloyd's Register Foundation

TUE JUL 24 1923
 FRI. 12 OCT. 1923

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.