

REPORT ON MACHINERY.

No. 1259

Received at London Office

Date of writing Report 21st Octr. 1919 When handed in at Local Office 21st Octr. 1919 Port of NAGASAKI. FR 5-DEC. 1919

To. in Survey held at NAGASAKI. Date, First Survey 26th March, 1919 Last Survey 6th Octr. 1919

Leg. Book. on the s.s. "Selagoa Maru" (Number of Visits 6)

Master B. Saito Built at Nagasaki By whom built Mitsubishi Zosen Kaisha Tons Gross 7638 Net 4367

Engines made at Nagasaki By whom made Mitsubishi Zosen Kaisha when made 1919

Boilers made at Nagasaki By whom made Mitsubishi Zosen Kaisha when made 1919

Registered Horse Power Owners Nippon Yusen Kaisha Port belonging to Yokohama

Horse Power as per Section 28 620 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

INES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

of Cylinders 28" 47" & 79" Length of Stroke 57" Revs. per minute 81 Dia. of Screw shaft as per rule 15.911 as fitted 16.2 Material of screw shaft Steel

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

Is the propeller boss If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part

When the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

are fitted, is the shaft lapped or protected between the liners Length of stern bush 6' 0"

of Tunnel shaft as per rule 14.541 as fitted 14.2 Dia. of Crank shaft journals as per rule 15.268 as fitted 15.2 Dia. of Crank pin 16" Size of Crank webs 23" x 10 1/2 Dia. of thrust shaft under

rs 15 3/4" Dia. of screw 18.9" Pitch of Screw 19.9" No. of Blades 4 State whether moveable Yes Total surface 103.5 sq. ft.

of Feed pumps 2 Diameter of ditto 5" Stroke 25 1/2" Can one be overhauled while the other is at work Yes

of Bilge pumps 2 Diameter of ditto 5" Stroke 25 1/2" Can one be overhauled while the other is at work Yes

of Donkey Engines 5 Sizes of Pumps 2 1/2" Simplex 10 1/2" x 8" x 21" 1 1/2" x 5" x 12" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 3 @ 3 1/2" In Holds, &c. No. 1 Hold 2 @ 3 1/2" No. 2 Hold 2 @ 3 1/2" No. 3 Hold 2 @ 3 1/2" No. 4 Hold 2 @ 3 1/2" No. 5 Hold 2 @ 3 1/2" No. 6 Hold 2 @ 3 1/2" Tunnel well 1 @ 3 1/2"

of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump. Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"

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 None.

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

Are all pipes carried through the bunkers Bilge pipes How are they protected With steel plates.

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 Shelter deck.

Boilers, &c.—(Letter for record 3) Manufacturers of Steel Kure Naval Works

Heating Surface of Boilers 788.4 sq. ft. Is Forced Draft fitted Yes No. and Description of Boilers 3 Cylindrical, Single ended

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 28th July 1919 No. of Certificate 95

Can each boiler be worked separately Yes Area of fire grate in each boiler 54.31 sq. ft. No. and Description of Safety Valves to

boiler 2 Spring loaded Area of each valve 7.62 sq. ins. Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes

Least distance between boilers or uptakes and bunkers or woodwork 3' 3" Mean dia. of boilers 14' 0" Length 11' 6" Material of shell plates Steel

Thickness 1 5/16" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams Double lap

seams 2 straps Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 7 1/2" x 4 1/2" Lap of plates or width of butt straps 1' 8 1/2"

Percentages of strength of longitudinal joint rivets 88.6 plate 85.5 Working pressure of shell by rules 212 lbs. Size of manhole in shell 16" x 12"

of compensating ring 37" x 33" x 1 1/2" No. and Description of Furnaces in each boiler 3 Morrison's Bull Suspension Material Steel Outside diameter 3' 9 1/4"

of plain part top bottom Thickness of plates crown 9" bottom 7 1/2" Description of longitudinal joint Welded No. of strengthening rings None

Working pressure of furnace by the rules 217 lbs. Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 1 1/2"

of stays to ditto: Sides 11 1/4" x 7 1/4" Back 10 3/8" x 9" Top 11 1/2" x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 211 lbs.

Material of stays Steel Area at smallest part 2.03 sq. ins. Area supported by each stay 79 sq. ins. Working pressure by rules 231 lbs. End plates in steam space:

Material Steel Thickness 1 5/16" Pitch of stays 1' 8" x 1' 6" How are stays secured Double nuts Working pressure by rules 225 lbs. Material of stays Steel

at smallest part 7.67 sq. ins. Area supported by each stay 357 sq. ins. Working pressure by rules 227 lbs. Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 233 lbs.

of tubes 3 1/2" Pitch of tubes 4 3/8" x 4 1/2" Material of tube plates Steel Thickness: Front 1" Back 7/8" Mean pitch of stays 11' 8"

across wide water spaces 13 1/2" Working pressures by rules 230 lbs. Girders to Chamber tops: Material Steel Depth and

ess of girder at centre 10 1/2" x 8" double Length as per rule 2' 7 3/8" Distance apart 11 1/2" x 9 1/2" Number and pitch of stays in each 3 @ 7"

Working pressure by rules 215 lbs. 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 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

009278-009286-0176

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:— 1 Crank shaft, 1 H.P. valve spindle, 1 L.P. valve spindle, 2 eccentric
1 set each of H.P., I.P., L.P. piston packing rings, 1 set each of metallic packings for piston rods & valve spindles,
1 plate set of top & bottom brasses & bolts for one connecting rod, 1/2 total number of junk ring bolts, 1 complete
coupling bolt, 1 complete set of main bearing bolts, 1 air pump rod, 1 impeller & spindle for circulation
1 set air pump valves, 3 cylinder escape valve springs, 1 complete set of valves & seats for feed & bilge
1 complete set of valves & seats for main & donkey feed chests, 1/2 total number of condenser tubes, 1/2 total
number of condenser ferrules, 4 safety valve springs, 100 assorted bolts & nuts, 150 lbs. of assorted steel
30 lbs. of assorted steel bars, 1 propeller shaft, 2 propeller blades, 1 and spare gear for auxiliary machine

The foregoing is a correct description,

NAGASAKI WORKS, MITSUBISHI ZOSSEN KAISHA, LTD.

GENERAL MANAGER.

Manufacturer.

1919
Dates of Survey while building { During progress of work in shops -- } Dec. 26, Apr. 5, 10, 16, 17, 29, May 3, 10, 14, 17, 20, 26, June 11, 17, 19, 23, 25, 26, July 3, 8, 11, 12, 17, 23, 24, 25
{ During erection on board vessel -- } Aug. 2, 5, 8, 11, 12, 13, 15, 18, 19, 21, 22, 25, 26, 27, 28, 29, 30, Sept. 1, 2, 3, 6, 8, 10, 12, 13, 16, 17, 19, 20, 22, 23, 25, Oct.
Total No. of visits 61.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders { 28.8.19 } Slides 10.9.19 Covers 28.8.19 Pistons 10.9.19 Rods 10.9.19
Connecting rods 10.9.19 Crank shaft 25.8.19 Thrust shaft 25.8.19 Tunnel shafts 10.9.19 Screw shaft 29.8.19 Propeller 10.9.19
Stern tube 25.8.19 Steam pipes tested 13.9.19 Engine and boiler seatings 22.8.19 Engines holding down bolts 13.9.19
Completion of pumping arrangements 17.9.19 Boilers fixed 12.9.19 Engines tried under steam 25.9.19
Completion of fitting sea connections 8.9.19 Stern tube 1.9.19 Screw shaft and propeller 8.9.19
Main boiler safety valves adjusted 23.9.19 Thickness of adjusting washers Jam nut
Material of Crank shaft Steel Identification Mark on Do. No. 153 ASW Material of Thrust shaft Steel Identification Mark on Do. No. 153
Material of Tunnel shafts Steel Identification Marks on Do. ASW Material of Screw shafts Steel Identification Marks on Do.
Material of Steam Pipes Solid drawn Steel Test pressure 600 lbs.

Is an installation fitted for burning oil fuel

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

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

These Engines and Boilers have been constructed under Special Survey, in accordance with the Rules, and of good materials and workmanship. They have been securely fitted on board, and have been satisfactorily tried under steam.
The Machinery of this vessel is eligible, in my opinion, for the entry of LMC 10.19 in the Register Book.

Mean speed on trial in water ballast condition = 15.21 knots.

It is submitted that this vessel is eligible for

THE RECORD + LMC 10.19. F.D.

The amount of Entry Fee ... 30/- : When applied for,
Special ... 892.50 : 17th Oct. 1919
Donkey Boiler Fee ... : When received,
Travelling Expenses (if any) ... : 21st Oct. 1919

Committee's Minute

Assigned

TUE MAR. 9 - 1920

+ LMC 10.19 F.D.

A. S. Williamson

Engineer Surveyor to Lloyd's Register of Shipping



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MACHINERY CERTIFICATE

NOTED