

REPORT ON MACHINERY

No. 2783
WED. 20 APR. 1921

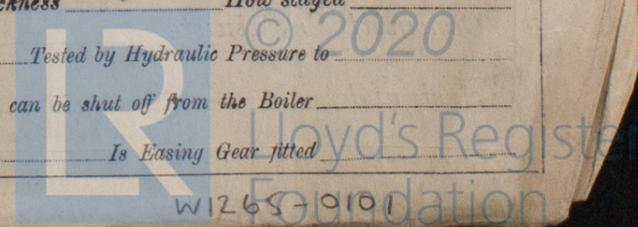
Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of YOKOHAMA
 No. in Survey held at URAGA Date, First Survey April 16th 1920 Last Survey 21-2-1921
 Reg. Book. URAGA (Number of Visits 1)
 on the Single Screw SUNGSHAN-MARU Tons { Gross 2529.69
 Net 1503.26
 Master URAGA Built at URAGA By whom built URAGA DOCK CO LTD When built 1921
 Engines made at Uruga By whom made Uruga Dock Co Ltd when made 1921
 Boilers made at do By whom made do do when made 1921
 Registered Horse Power 303 Owners Nisshin Kaisha Kabushiki Kaisha Port belonging to Tokyo
 Nom. Horse Power as per Section 28 303 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion Reciprocating No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24 x 36 x 58 Length of Stroke 39 Revs. per minute 85 Dia. of Screw shaft 12.2 Material of Steel
 as fitted 12.375 screw shaft
 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 Continued 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 Yes If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 54"
 Dia. of Tunnel shaft 10.95 as per rule 11 Dia. of Crank shaft journals 11.45 as per rule 11.75 Dia. of Crank pin 12 Size of Crank webs 22 x 7 1/2 Dia. of thrust shaft under
 collars 11 3/4 Dia. of screw 14 1/2 Pitch of Screw 16 1/2 No. of Blades 4 State whether moveable No Total surface 72 sq
 No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 21 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 21 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 9 x 11 x 19 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room + B.R. 3-3 In Holds, &c. F.P. No 1 A-3 No 2 5 1-3 1/2
T.M. 1-2 1/2
 No. of Bilge Injections 1 sizes 6 1/2 Connected to condenser, or to circulating pump pumps Is a separate Donkey Suction fitted in Engine room & size 1-3 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 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 Bilge suction How are they protected Boxed in
 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 platform E.R.

BOILERS, &c.—(Letter for record Yamata S.W. + Jellous S.W.) Manufacturers of Steel Yamata S.W. + Jellous S.W.
 Total Heating Surface of Boilers 4307.4 Is Forced Draft fitted Yes No. and Description of Boilers 2 Scotch Marine Type
 Working Pressure 200 Tested by hydraulic pressure to 400 Date of test 24-12-20 No. of Certificate 149
 Can each boiler be worked separately Yes Area of fire grate in each boiler 49.5 sq No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 7.088 sq Pressure to which they are adjusted 200 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 13-6 Length 12-0 Material of shell plates S
 Thickness 1/4 Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR 6
 long. seams TR 0/35 Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 10" Lap of plates or width of butt straps 2 1/2
 Per centages of strength of longitudinal joint 85.2 Working pressure of shell by rules 209.18 Size of manhole in shell 16 x 12
 rivets 85.6 plate 85.6
 Size of compensating ring 36 1/2 x 22 1/2 x 1 1/4 No. and Description of Furnaces in each boiler 3 Marine Material S Outside diameter 40 1/4
 Length of plain part 19 Thickness of plates 19 Description of longitudinal joint welded No. of strengthening rings 13
 top 19 bottom 19
 Working pressure of furnace by the rules 234 Combustion chamber plates: Material S Thickness: Sides 1/8 Back 1/8 Top 1/8 Bottom 1/8
 Pitch of stays to ditto: Sides 8 x 9 Back 8 x 9 Top 8 x 9 1/2 If stays are fitted with nuts or riveted heads NUTS Working pressure by rules 211
 Material of stays S Area at smallest part 1 1/8 Area supported by each stay 72 sq Working pressure by rules 224 End plates in steam space:
 Material S Thickness 1/8 Pitch of stays 20 x 19 1/4 How are stays secured DR NUTS Working pressure by rules 206 Material of stays S
 Area at smallest part 8.2 Area supported by each stay 39 1/2 sq Working pressure by rules 206 Material of Front plates at bottom S
 Thickness 7/8 Material of Lower back plate S Thickness 7/8 Greatest pitch of stays 13 1/2 x 8 Working pressure of plate by rules 244.8
 Diameter of tubes 3 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S Thickness: Front 7/8 Back 7/8 Mean pitch of stays 9.87
 Pitch across wide water spaces 13 1/2 Working pressures by rules 277 Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 9 1/2 x 10 1/2 x 1 1/8 Length as per rule 32 1/8 Distance apart 9 1/2 Number and pitch of stays in each 32 x 8
 Working pressure by rules 242 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 ---



IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 4 Connecting rod top & bottom end bolts & nuts. 2 main clearing bolts & nuts 1 set Top & bottom end brass coupling bolts set of Feed & sludge valves set main engine piston rings & springs HP & LP valve spindles 2 eccentric straps Air pump and circulation pump and impeller Propeller shaft & propeller 2 Dry boiler tubes set escape valves Quantity of assorted bolts & nuts 1 pair of various sizes

The foregoing is a correct description,

K. Ushiocken

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 14/6, 20/6, 28/6, 27/8, 30/8, 1/9, 2/9, 16/10, 17/10, 21/10, 6/11, 15/11, 20/11, 22/11, 27/11, 29/11, 3/12, 8/12, 9/12, 10/12, 15/12, 17/12. During erection on board vessel -- 22/24, 26, 29, Dec 1/6, 7, 8, 9, 10, 13, 15, 17, 21, 22, 24, 27, 28, Jan 6/10, 18, 26, Feb 10/14, 19, 21. Total No. of visits 50

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 10/12/20 Slides 27/12/20 Covers 10/12/20 Pistons 6/12/20 Rods 27/12/20 Connecting rods 25/12/20 Crank shaft 18/1/21 Thrust shaft 28/12/20 Tunnel shafts 27/12/20 Screw shaft 10/12/20 Propeller 10/12/20 Stern tube 7/12/20 Steam pipes tested 14/2/21 Engine and boiler seatings 6/12/20 Engines holding down bolts 26/1/21 Completion of pumping arrangements 19/2/21 Boilers fixed 6/1/21 Engines tried under steam 19/2/21 Completion of fitting sea connections 28/12/20 Stern tube 26/12/20 Screw shaft and propeller 14/2/21 Main boiler safety valves adjusted 19/2/21 Thickness of adjusting washers Locknuts Material of Crank shaft S Identification Mark on Do. J Material of Thrust shaft S Identification Mark on Do. HDB Material of Tunnel shafts S Identification Marks on Do. HDB Material of Screw shafts S Identification Marks on Do. HDB Material of Steam Pipes Copper Test pressure 400. 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 Yes If so, state name of vessel O.S. LUSHAN MARU Reg No. 2

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 conditions with satisfactory results. In the opinion of the undersigned the machinery is eligible to be classed in the Register with LMC 2.21. Electric light

It is submitted that this vessel is eligible for THE RECORD. + LMC. 2.21 FD CL

J.M. R.M. 29/4/21

The amount of Entry Fee ... £ 60: When applied for, Special ... £ 616: 2A-2 19/21 Donkey Boiler Fee ... £: When received, Travelling Expenses (if any) £ 60: 1-3 19/21

H.D. Buchanan & F.P. Snellbold

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

+ L.M.C. 2.21

L.D. C.L.



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