

REPORT ON MACHINERY.

No. 2404

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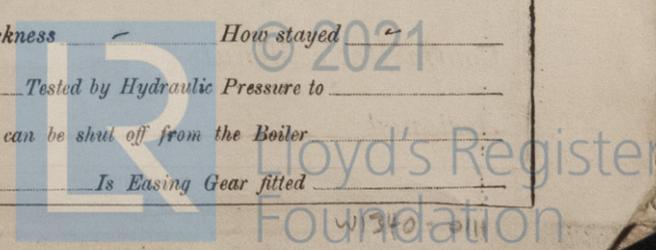
Date of writing Report 5-2-1919 When handed in at Local Office 12-2-1919 Port of Kobe
 No. in Survey held at Imoshima + Osaka Date, First Survey 26th Sept 1918 Last Survey 26th Dec 1918
 Reg. Book. on the single screw steel steamer T6-mi abaru. (Number of Visits Eighteen) Gross 3194.63
 Master M Murakami Built at Imoshima By whom built Osaka Iron Works Ltd Tons Net 1981.98
 When built 1918
 Engines made at Imoshima By whom made Osaka Iron Works Ltd when made 1918
 Engines made at Osaka By whom made Osaka Iron Works Ltd when made 1918
 Rated Horse Power Owners Kobe Shosen Kaisha Ltd Port belonging to Kobe

Horse Power as per Section 28 258. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 No. of Cylinders 2 2. 3 7. 6 1 Length of Stroke 4 2 Revs. per minute 90.5 Dia. of Screw shaft as per rule 12.8 Material of screw shaft as fitted 1.3 Steel
 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
 propeller boss yes If the liner is in more than one length are the joints burned One length If the liner does not fit tightly at the part
 in 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 4'-9 3/4
 Dia. of Tunnel shaft as per rule 11.2 Dia. of Crank shaft journals as per rule 11.7 7 Dia. of Crank pin 12 Size of Crank webs 7 7/8 x 23 Dia. of thrust shaft journals as fitted 11 3/8 3 x 25 2 0 pins journals
 Dia. of screw 16-0 Pitch of Screw 16-4 1/2 No. of Blades 4 State whether moveable Solid Total surface 80 ft
 No. of Feed pumps 2 Diameter of ditto 3 1/4 Stroke 2 4 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 2 4 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 4 Sizes of Pumps 9 x 10 1/2 x 10 for Ballast duplex 6 x 4 x 6 for Donkey fuel duplex
 Engine Room 1 chain bilge 4" 2-E.R. bilge S + P both 3" In Holds, &c. 1 No 1, 2 Holds 2 No 3 Hold 2 Boiler room all
 dia 1 No 3 Hold 3 1/2 Tunnel bilge 2 1/2
 No. of Bilge Injections 1 sizes 4 1/2 Connected to condenser, or to circulating pump or pump Is a separate Donkey Suction fitted in Engine room & size yes 3"
 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
 All connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both large valves smaller cocks
 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 the pipes carried through the bunkers Voice tube, Soil pipes + pipes with electric wire How are they protected Wood + iron bands
 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 E.R. middle grating

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Lucken Iron + Steel Co. Brighton patent blue Co.
 Total Heating Surface of Boilers 3824 ft² Is Forced Draft fitted yes No. and Description of Boilers Two single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 5th Dec 1918 No. of Certificate 366 367
 Can each boiler be worked separately yes Area of fire grate in each boiler 45 ft² No. and Description of Safety Valves to
 boiler Two spring loaded Area of each valve 3 1/2 dia Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" Mean dia. of boilers 13'-6" Length 11'-6" Material of shell plates Steel
 Thickness 1 3/16" Range of tensile strength 26,796 to 27,000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S.R.I.
 seams J.R. & B.S. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 1'-6 1/2"
 Percentages of strength of longitudinal joint rivets 42.7 Working pressure of shell by rules 180 lbs Size of manhole in shell 12 x 16 end plates
 plate 85.3
 No. of compensating ring Flanged end plates No. and Description of Furnaces in each boiler 3 Slightens Material Steel Outside diameter 3'-4 1/2"
 Length of plain part top 2" crown 2" Description of longitudinal joint Weld No. of strengthening rings 4
 bottom 2" bottom 2"
 Working pressure of furnace by the rules 187 Combustion chamber plates: Material Steel Thickness: Sides 23 3/4 Back 32 3/4 Top 32 3/4 Bottom 7/8
 No. of stays to ditto: Sides 9.5 Back 9.3 Top 9.45 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 214
 Material of stays Steel Area at smallest part 2.10 sq ft Area supported by each stay 90 sq ft Working pressure by rules 210. End plates in steam space:
 Material Steel Thickness 1 3/8" Pitch of stays 25" x 19" How are stays secured S.N. W's Working pressure by rules 180. Material of stays Steel
 Area at smallest part 8.76 sq ft Area supported by each stay 4.75 sq ft Working pressure by rules 180 Material of Front plates at bottom Steel
 Thickness 1" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 14" wide water spaces Working pressure of plate by rules 180.
 Diameter of tubes 3" Pitch of tubes 4.3. Material of tube plates Steel Thickness: Front 1" Back 13/16" Mean pitch of stays 10 1/2"
 Width across wide water spaces 14" Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and
 Thickness of girder at centre 10" x 1 7/8" Length as per rule 32 Distance apart 10 1/2" Number and pitch of stays in each 2 @ 9"
 Working pressure by rules 180 Steam dome: description of joint to shell % of strength of joint

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 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:— One set piston springs, 2 Bottom end bolts & nuts, 2 chain bearing bolts & nuts, 1 set coupling bolts, 2 Top end bolts & nuts, 2 fuel pump valves & seats, 2 bilge pump valve & seats, 1/4 set of total number of junk ring bolts, Two slide valve spindles Two eccentric rods for main engine One set of top & bottom end brasses One set main bearing bolts 30 of total number of condensers tubes One air pump rod & one set valves, One set circulating pump valves & pump rod Two safety valve springs One set fuel check valve & seats 6 Patent tube stoppers 6 common tube stoppers

The foregoing is a correct description, 1/4 of total of five bars

J. Y. ... Manufacturer

Dates of Survey while building { During progress of work in shops -- } 26th Sept Oct 7th 13th 15th 25th Nov 5th 7th 12th 18th 21st 27th { During erection on board vessel --- } Dec 2nd 5th 10th 12th 17th 21st 26th Total No. of visits Eighteen Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders Nov 7th 18 Slides Nov 25th 1918 Covers 7-10-18 Pistons 7-10-18 Rods 20-10-18 Connecting rods 20-10-18 Crank shaft 14-10-18 Thrust shaft 9-8-18 Tunnel shafts 27-9-18 Screw shaft 23-7-18 Propeller 7-10-18 Stern tube Oct 25th 18 Steam pipes tested 17-12-18 Engine and boiler seatings 17-12-18 Engines holding down bolts 21-12-18 Completion of pumping arrangements 21-12-18 Boilers fixed 17-12-18 Engines tried under steam 21-12-18 Completion of fitting sea connections 17-12-18 Stern tube 27-11-18 Screw shaft and propeller 27-11-18 Main boiler safety valves adjusted 21-12-18 Thickness of adjusting washers Lock nuts Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S 19-12-18* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S 19-12-18* Material of Tunnel shafts *Steel* Identification Marks on Do. *LLOYD'S 19-12-18* Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S 19-12-18* Material of Steam Pipes *Steel* Test pressure 360 lbs

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 *Peking Maru, Mikisasa Maru, Honson Maru, Kuruma Maru*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been made and fitted under special survey in accordance with the requirements of the rules and the material and workmanship have been found good. The machinery is eligible in my opinion for the record of + LMC 12.18*)

It is submitted that this vessel is eligible for THE RECORD. + LMC 12.18. F.D.

J.W.D. G.R.S. 8/13/19

The amount of Entry Fee ... £ *yen*: 20⁰⁰/₁₀₀ When applied for, Special ... £ *yen*: 602⁰⁰/₁₀₀ 30th Dec 1918 When received, Donkey Boiler Fee ... £ - : - Travelling Expenses (if any) £ - : - 13th Jan 1919

John Sim Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute, FRI. 28 MAR. 1919 Assigned + d. LMC 12.18 F.D.

Certificate (if required) to be sent to The Surveyors are requested not to write on or below the space for Committee's Minute.

Rpt. 13. Port of No. in Reg. Book Owners Yard No. DESCRIPTION Capacity of Where is Dy Position of Positions of Two If fuses are circuits If vessel is Are the fuses Are all fuses are per Are all swite Total number A Engine B Office C G H D Steam E Char Ma If arc lights, globes, Where are t DESCRIPTION Main cable ca Branch cables Branch cables Leads to lamp Cargo light ca DESCRIPTION offic Eng Joints in cable Are all the jo positions Are there any How are the

