

## REPORT ON MACHINERY.

No. 2923

Date of writing Report July 11<sup>th</sup> 1920 When handed in at Local Office Aug 25<sup>th</sup> 1920 Port of Kobe  
 No. in Survey held at Kobe Date, First Survey Oct 22<sup>nd</sup> 1919 Last Survey Aug 18<sup>th</sup> 1920  
 Reg. Book. on the Steel Single Screw Steamer "THAMES MARU" (Number of Visits 93.)  
 Master Kobe Built at Kobe By whom built Kawasaki Dockyard Co. Ltd. When built 1920  
 Engines made at Kobe By whom made Kawasaki Dockyard Co. Ltd. when made 1920  
 Boilers made at do By whom made do when made 1920  
 Registered Horse Power NHP. 440 Owners The Kawasaki Dockyard Co. Ltd. Port belonging to Kobe  
 Nom. Horse Power as per Section 28 440. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks 3  
 Dia. of Cylinders 26": 43½": 72" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft 15.41" Material of steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner Is the after end of the liner made water tight  
 in 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  
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two  
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5'-5¼"  
 Dia. of Tunnel shaft 13.48" Dia. of Crank shaft journals 14.15" Dia. of Crank pin 14¾" Size of Crank webs 9½" x 20" Dia. of thrust shaft under  
 collars 14¾" Dia. of screw 17'-6" Pitch of Screw 19'-0" mean No. of Blades 4 State whether moveable Total surface 100 sq. ft.  
 No. of Feed pumps One Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes (with Weir's Feed)  
 No. of Bilge pumps Two Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines Three Sizes of Pumps Weir's 9½" x 7" x 24" two No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Three 3½" Ballast 10" x 11" x 12" dupl. Gen. Serv. 7½" x 5" x 6" Donkey 5½" x 3½" x 9" In Holds, &c. No. 1, 3 + 4 Hold each two 3½"  
One 3½" to Tunnel Well No. 2 Hold two 4"  
 No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump in. h.p. Is a separate Donkey Suction fitted in Engine room & size yes 3½"  
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices in 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 Larger 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  
 What pipes are carried through the bunkers None How are they protected ✓  
 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 Upper platform of Eng. Rm.

OILERS, &c.—(Letter for record S) Manufacturers of Steel Illinois St. Co., Carnegie St. Co., Am. Spiral Co.,  
2252 x 2 + 1132 (Aux. BLR) Midvale St. Co., Wöhler Bros. Co.  
 Total Heating Surface of Boilers 256360 Is Forced Draft fitted yes No. and Description of Boilers Two S. Co. + Aussey. S. Co.  
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 13-5-20; 20-5-20 No. of Certificate 13-5-20; 20-5-20  
 Can each boiler be worked separately yes Area of fire grate in each boiler 60½" No. and Description of Safety Valves to  
 each boiler Two Spring loaded Area of each valve 3¾" dia. Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 14'-6" Length 12'-0" Material of shell plates steel  
 Thickness 1½" Range of tensile strength 2678 to 32500 Are the shell plates welded or flanged + Descrip. of riveting: cir. seams End double  
Double riveted long. seams Double straps Diameter of rivet holes in long. seams 1¾" Pitch of rivets 8¾" + 4¾" Lap of plates or width of butt straps 19½" x 1¼"  
 Per centages of strength of longitudinal joint rivets 95.84 Working pressure of shell by rules 201 lbs. Size of manhole in shell 16" x 12"  
 plate 84.28 Size of compensating ring (1½" flange) 1¾" No. and Description of Furnaces in each boiler 3 Morrison's Material steel Outside diameter 48¼"  
 Length of plain part top ✓ Thickness of plates crown 2½/32 Description of longitudinal joint Weld No. of strengthening rings ✓  
 Working pressure of furnace by the rules 221 lbs. Combustion chamber plates: Material steel Thickness: Sides 1¼" Back 1¼" Top 1¼" Bottom 7/8"  
 Pitch of stays to ditto: Sides 8½" x 8½" Back 8½" x 9" Top 8½" x 9½" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 203 lbs.  
 Material of stays steel Area at smallest part 2.10" Area supported by each stay 8½" x 9½" Working pressure by rules 230 lbs. End plates in steam space:  
 Material steel Thickness 1½" Pitch of stays 19¾" x 20½" How are stays secured Double nuts + small washers Working pressure by rules 202 lbs. Material of stays steel  
 Area at smallest part 10" Area supported by each stay 19¾" x 20½" Working pressure by rules 260 lbs. Material of Front plates at bottom steel  
 Thickness 13/16" Material of Lower back plate steel Thickness ¾" Greatest pitch of stays 13½" at Wide Working pressure of plate by rules 232 lbs.  
 Diameter of tubes 3¾" Pitch of tubes 4½" x 4½" Material of tube plates steel Thickness: Front 1" Back 13/16" Mean pitch of stays 8¾"  
 Pitch across wide water spaces 13¾" x 8" Working pressures by rules 240 lbs. Girders to Chamber tops: Material steel Depth and  
 thickness of girder at centre 10¾" x 13/16" (2) Length as per rule 34½" Distance apart 9¾" Number and pitch of stays in each 3 @ 8½"  
 Working pressure by rules 220 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 \_\_\_\_\_



AUXILIARY  
IS A DONKEY BOILER FITTED?

yes

If so, is a report now forwarded

yes

SPARE GEAR. State the articles supplied:-

Four main bearing bolts + nuts. Set packing rings + springs each piston. Centrifugal pump impeller  
Two crank pin bolts + nuts. Set junk ring bolts + nuts. Shaft + nut.  
Two crosshead bolts + nuts. Set of packing for each piston rods + valve rods. A. P. rod + nut.  
Set coupling bolts + nuts. Propeller shaft with nut. 3 Safety valve springs.  
Set feed + bilge pump valves. 1 Feed check valve + seat. Cond. boiler tubes etc.  
Assorted bolts, nuts + iron. Slide valve spindle each size. 1 Set A. P. head valves.

The foregoing is a correct description,

Kawasaki Dockyard Co., Ltd.,

Per.

Secretary.

Manufacturer.

Dates of Survey while building  
During progress of work in shops - - -  
During erection on board vessel - - -  
Total No. of visits 93.

Is the approved plan of main boiler forwarded herewith

yes

Dates of Examination of principal parts—Cylinders 7-5-20 Slides 14-6-20 Covers 28-5-20 Pistons 28-5-20 Rods 4-6-

Connecting rods 14-5-20 Crank shaft 1-5-20 Thrust shaft 1-5-20 Tunnel shafts 21-4-20 Screw shaft 12-7-20 Propeller 6-5-

Stern tube 15-5-20 Steam pipes tested 24-5-20 Engine and boiler seatings 8-5-20 Engines holding down bolts 14-6-20

Completion of pumping arrangements 22-6-20 Boilers fixed 14-6-20 Engines tried under steam 12-7-20

Completion of fitting sea connections 25-5-20 Stern tube 18-5-20 Screw shaft and propeller 25-5-20

Main boiler safety valves adjusted 10-7-20 Thickness of adjusting washers Locknuts (Sealed by Govt Insp.)

Material of Crank shaft Forged Steel Identification Mark on Do. 1-5-20 AWR Material of Thrust shaft 7S. Identification Mark on Do. 4-6-20

Material of Tunnel shafts 7S. Identification Marks on Do. 21-4-20 AWR Material of Screw shafts 7S. Identification Marks on Do. 12-7-20

Material of Steam Pipes S.D. Steel Test pressure 600 lb. 12-7-20 AWR

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

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

The Machinery has been made + fitted under Special Survey in accordance with the requirements of the Rules and the materials + workmanship are good.

The Machinery is eligible in my opinion for the notation of LMC 8-20 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 8-20 FD.

Roll

7/10/20

The amount of Entry Fee ... £ 30.-  
Special ... £ 735.-  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ 20.-

When applied for.

Aug 17 1920

When received,

Aug 23 1920

A Watt

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI OCT. 8 1920

Assigned

+ L.M.C. 8.20

MACHINERY CERT.  
WRITTEN.



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Foundation