

# REPORT ON MACHINERY

No. 21684

MON OCT. 1922

Received at London Office

Date of writing Report

When handed in at Local Office

9 June 1922 Port of New York

No. in Survey held at

Schenectady N.Y.

Date, First Survey

AUG. 30-21

Last Survey

SEP. 13 1922

Reg. Book.

on the Auxiliary Turbines & Generators for the S.S. Kamoi

(Number of Visits 30)

Gross 10222  
Net 5704

Master \_\_\_\_\_ Built at Camden N.J. By whom built New York Shipbuilding Corp. When built 1922

Engines made at Schenectady N.Y. By whom made General Electric Company when made 1922

Boilers made at Camden N.J. By whom made New York S.P. Corp. when made 1922

Registered Horse Power 840 Owners IMPERIAL JAPANESE NAVY

Shaft Horse Power at Full Power 670 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

TURBINE ENGINES, &c.—Description of Engines Two single reduction geared turbines driving two D.C. generators or one D.C. generator & one A.C. auxiliary generator No. of Turbines Two

Diameter of Rotor Shaft Journals, H.P. 3.5" L.P. Diameter of Pinion Shaft see Cleveland report

Diameter of Journals DC generator Distance between Centres of Bearings 5-4 5/8 Diameter of Pitch Circle AC generator shaft

Diameter of Wheel Journals Distance between Centres of Bearings 6-3 3/8 Diameter of Pitch Circle of Wheel Journals

Width of Face Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule as fitted

No. of Screw Shafts Diameter of same as per rule as fitted Diameter of Propeller Pitch of Propeller

No. of Blades State whether Moveable Total Surface Diameter of Rotor Drum, H.P. L.P. Astern

Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Power, Turbine 500 w/ DC GENERATOR 1100

500 w/ AC GENERATOR 1190

ARTICULARS OF BLADING. " " " FULL " WHEN COUPLED TO A.C. GENERATOR.

	H.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
ST EXPANSION	1 9/32 + 1 3/32	2-5 3/4	2						
ND "	1 1/4	2-6 1/4	1						
RD "	2"	2-9 3/8	1						
TH "	3 3/8	3-0 1/8	1						
TH "									
TH "									
TH "									
TH "									

No. and size of Feed pumps

No. and size of Bilge pumps

No. and size of Bilge suction in Engine Room

In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible

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

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

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

What pipes are carried through the bunkers How are they protected

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

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

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

OILERS, &c.—(Letter for record ) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

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

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

plates

Size of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter

Length of plain part top crown Thickness of plates Description of longitudinal joint No. of strengthening rings

bottom bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

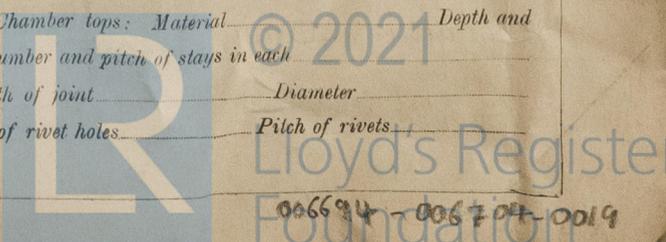
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

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

Thickness of shell plates Material Description of longitudinal joint Diameter 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? \_\_\_\_\_ If so, is a report now forwarded? \_\_\_\_\_

**AUXILIARY SETS.**

SPARE GEAR. State the articles supplied:— ONE COMPLETE SET TURBINE BEARINGS. ONE SET PACKING FOR SHAFT COMPLETE. ONE SET BABBITTY FACED THRUST PLATES FOR THRUST BEARING ONE THROTTLE VALVE. SPARE SPRING FOR GOVERNOR.  
 ONE ARMATURE COMPLETE WITH COMMUTATOR & SHAFT. HALF SET ARMATURE COILS. ONE SET BEARING LININGS. TWO D.C. BRUSH HOLDERS COMPLETE. 6 D.C. BRUSH HOLD SPRINGS. THREE SETS D.C. BRUSHES. ONE COMMUTATING FIELD COIL. ONE MAIN FIELD COIL. GEAR SPARES. ONE COMPLETE SET BEARINGS. ONE SHAFT & PINION COMPLETE. ONE THRUST BEARING. ONE SET MANDRELS.

The foregoing is a correct description,

W.L. Wright, Marine Eng Dept Gen. Elec. Co. Manufacturer.

Aug 30<sup>th</sup> Oct 3. 12<sup>th</sup> Nov 11-23 Dec 9-21 Jan 6. 13-18-24 Feb 6-14 March 2-14-22-31  
 April 13-14 May 24-25. JUNE 16, 19, 24. JULY 10, 20, 27. AUG. 1. SEP. 30.  
 Dates of Survey while building: During progress of work in shops --  
 During erection on board vessel ---  
 Total No. of visits 30.

Is the approved plan of main boiler forwarded herewith \_\_\_\_\_

Dates of Examination of principal parts—Casings \_\_\_\_\_ Rotors \_\_\_\_\_ Blading \_\_\_\_\_ Gearing \_\_\_\_\_  
 Rotor shaft \_\_\_\_\_ Thrust shaft \_\_\_\_\_ Tunnel shafts \_\_\_\_\_ Screw shaft \_\_\_\_\_ Propeller \_\_\_\_\_  
 Stern tube \_\_\_\_\_ Steam pipes tested \_\_\_\_\_ Engine and boiler seatings \_\_\_\_\_ Engines holding down bolts \_\_\_\_\_  
 Completion of pumping arrangements \_\_\_\_\_ Boilers fixed \_\_\_\_\_ Engines tried under steam \_\_\_\_\_  
 Main boiler safety valves adjusted \_\_\_\_\_ Thickness of adjusting washers \_\_\_\_\_  
 Material and tensile strength of Rotor shafts Nickel Steel 115500, 84500 18 1/2" Identification Mark on Do. W.B.  
 Material and tensile strength of Pinion shafts O.H. STEEL FORGED. 83300 42900 23% Identification Mark on Do. W.B.  
 Material of Wheel shaft O.H. STEEL Identification Mark on Do. W.B. Material of Thrust shaft Identification Mark on Do.  
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.  
 Material of Steam Pipes \_\_\_\_\_ Test pressure \_\_\_\_\_

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 a duplicate of a previous case no If so, state name of vessel \_\_\_\_\_

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 This machinery has been built under special survey, materials & workmanship good. Hydraulic tests on turbine casings satisfactory. It has been shipped to Camden N.J. for installation in the vessel.  
 THE AUXILIARY TURBINES & GENERATORS HAVE BEEN SECURED ON BOARD IN A SATISFACTORY MANNER, THEY WERE TRIED UNDER FULL WORKING CONDITIONS ON TRIAL TRIP, AND WERE FOUND SATISFACTORY.

The amount of Entry Fee ... £ \_\_\_\_\_ When applied for, \_\_\_\_\_  
 Special ... £ \_\_\_\_\_ 19 \_\_\_\_\_  
 Donkey Boiler Fee See other report £ \_\_\_\_\_ When received, \_\_\_\_\_  
 Travelling Expenses (if any) £ \_\_\_\_\_ 19 \_\_\_\_\_

William Butler Buchanan  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 26 SEP. 1922  
 NEW YORK  
 Assigned See Phil 4445

