

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.Y.

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.Y.

By whom made

New York S.P. Corp.

when made

1922

ALL POWER OF AUXILIARY TURBINE WHEN COUPLED TO
REGISTERED HORSE POWER

840

Owners IMPERIAL JAPANESE NAVY

Port belonging to

Shaft Horse Power at Full Power
OF EACH AUXILIARY TURBINE

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

Distance between Centres of Bearings

5-1/8"

Diameter of Pitch Circle

AC generator shaft

Diameter of Rotor Shaft Journals

Distance between Centres of Bearings

6-3/8"

Diameter of Pitch Circle of Wheel Journals

Width of Face

6-3/8"

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

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 Full Power, Turbine

500

DC GENERATOR

1100

ARTICULARS OF BLADING.

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 1/2" + 1 1/2"	2'-5 3/4"	2						
END	1 1/4"	2'-6 1/4"	1						
RED	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

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

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

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 BABBITT 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 HOLDERS. 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 30th Oct 3. 12th 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.
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 fired _____ 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 ... £ _____ When received, _____
Travelling Expenses (if any) £ _____ 19 _____

Committee's Minute

Assigned

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



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