

REPORT ON MACHINERY.

No. 21684

Received at London Office MON. 1 OCT. 1922

Date of writing Report SEP. 14 1922 When handed in at Local Office 9 June 1922 Port of New York

No. in Survey held at Schenectady NY Date, First Survey Aug 30 - 1921 Last Survey SEP. 13 1922

Reg. Book. on the Main Turbine, Generator & Motors for the SS Kamoi (Number of Visits 104) Tons { Gross 10222 Net 5704

Master ☒ Built at Camden N.J. By whom built New York S.S. Corp When built 1922

Engines made at Schenectady NY By whom made General Electric Co when made 1922

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

Registered Horse Power 1659 HP Owners IMPERIAL JAPANESE NAVY Port belonging to

Shaft Horse Power at Full Power 8000 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

TURBINE ENGINES, &c.—Description of Engines Turbine direct coupled to AC generator No. of Turbines One

Diameter of Rotor Shaft Journals, FOR 8" AFT 15" DISTANCE BETWEEN CENTRES OF BEARINGS 8'-6 3/4"

Diameter of GENERATOR SHAFT 15" Distance between Centres of Bearings 12'-10 1/2" Diameter of Pitch Circle BEARING 12"

Diameter of MOTOR SHAFTS 14" AND Distance between Centres of Bearings 15" dia - 6'-6 1/2" Diameter of Pitch Circle of Wheel 12 3/4" 12.73

Width of Face — Diameter of Thrust Shaft under Collars 13.75" Diameter of Tunnel Shaft 14.75" TUBE

No. of Screw Shafts TWO 2 Liners as per rule 14.55" Diameter of Propeller 16'-0" Pitch of Propeller 14'-10"

No. of Blades 3 State whether Moveable YES Total Surface 64.34 ONE SCREW 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 2480 Propeller 124

ARTICULARS OF BLADING.

	H.P.			L.P.			ASTERN.		
	TOTAL 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.
1ST EXPANSION	1'-4" & 2'-17 1/2"	4'-6 5/8"	2						
2ND	13/16"	4'-5 1/16"	1						
3RD	1 3/8"	4'-5 7/8"	1						
4TH	1 1/16"	4'-6 3/16"	1						
5TH	2 3/16"	4'-6 1/16"	1						
6TH	2 1/16"	4'-4 3/16"	1						
7TH	3 7/8"	4'-8 3/8"	1						
8TH	4 9/16"	5'-5 7/16"	1						
9	7 13/16"	5'-8 9/16"	1						
10	13 7/16"	6'-2 1/8"	1						
TWO MAIN 16" X 12" X 24" SIMPLEX. ONE AUXIL. 12" X 8" X 24"									
ONE 12" X 8" X 24" SIMPLEX. ONE 6" X 5 3/4" X 6" DUPLEX.									
THREE 3 1/2" STROKEHOLD. THREE 3 1/2" BUNKERS. 4-3 1/2"									
In Holds, &c. PUMP ROOM BILGE, ONE 4"									

FOREPEAK, ONE 3"

No. of Bilge Injections 1 sizes 16" Connected to condenser, or to circulating pump YES. Is a separate Donkey Suction fitted in Engine Room & size YES.

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

Are all connections with the sea direct on the skin of the ship YES. Are they Valves or Cocks ALL VALVES EXCEPT BOILER BLOWS.

Are they fitted 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 BELOW.

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 PIPES. How are they protected STEEL PLATE GUARDS.

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 NONE. Is it fitted with a watertight door — worked from —.

BOILERS, &c.—(Letter for record)

Manufacturers of Steel SEE SEPARATE REPORT.

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 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 Thickness of plates Description of longitudinal joint No. of strengthening rings

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 End plates in steam space

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of stays

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Thickness Material of tube plates Thickness: Front Back Mean pitch of stays

Diameter of tubes Pitch of tubes Working pressures by rules Girders to Chamber tops: Material Depth and

Pitch across wide water spaces Length as per rule Distance apart Number and pitch of stays in each

thickness of girder at centre Steam dome: description of joint to shell % of strength of joint Diameter

Working pressure by rules Description of longitudinal joint Diameter of rivet holes Pitch of rivets

Thickness of shell plates Material Crown plates: Thickness How stayed

Working pressure of shell by rules

006594-006704-0015

SUPERHEATER. Type SEE BOILER REPORT. 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:— ONE SET COUPLING BOLTS. 6 WEARING SHOES FOR KINGSBURY TWO THERMOMETERS FOR LUBRICATING OIL SYSTEM. 1 SET OF VALVES FOR EACH SIZE OF PUMP ONE BUCKET & ROD FOR LUB. OIL PUMP. ONE R.H. & ONE L.H. PROPELLER BLADE WITH STUDS & NUTS. QUANTITY OF ASSORTED SIZES OF BOLTS & NUTS, BARS & PLATES. 100 BUCKET BLADES, NOZZLES, & PACKING FOR MAIN GENERATOR TURBINE, ONE THRU COLLAR (BEARING) & TWO BABBITTED THRUST PLATES, ONE SET OF BEARINGS FOR TURBINE & GENERATOR. TWO SPARE SPRINGS FOR BOILER SAFETY VALVE A COMPLETE FUEL OIL BURNERS. ONE COMPLETE SET OF FEED & BILGE PUMP VALVE GUARDS, SPRINGS ETC. SEE RPT. 13. FOR SPARE FOR MAIN GENERATOR AND MOTORS.

The foregoing is a correct description,
W. L. Wright, Marine Eng. Dept. Gen. El. Co. Manufacturer.
New York Shipb. Corp. J. B. Crew Engineer.

Aug 30 Oct 2-12-4 Nov 1-73 Dec 9-21 Jan 6-13-16-24 Feb 6-14 Mar 2-14-22-3
Dates of Survey while building During progress of work in shops -- April 13-14 May 11-75 JAN. 5, 6, 9, 12, 16, 18, 23, 25, 27, FEB. 1, 2, 3, 7, 8, 10, 13, 14, 15, 17, 20, 24, MAR. 1, 2, 3, 6, 9, 13, 14, 17, 21, 23, 24, 27, 29, APR. 4, 6, 7, 10, 11, 13, 15, 20, 25, 26, 28, MAY 3, 5, 16, 17, MAY 8, 10, 12, 18, 22, 23, 25, 31, JUNE 6, 9, 16, 19, 21, 29, JULY 10, 11, 13, 14, 20, 27, AUG. 1, 2, 3, 4, 5, 7, 12, 15, 26, SEP. 8, 13. Total No. of visits 104.

Dates of Examination of principal parts—Casings Jan 13th Rotor shafts Jan 24th Thrust shafts APR. 10. TUBE Shaft MAR. 20. Blading Jan 13th Gearing MAR. 3-27. Engines holding down bolts JUNE 19-29. Engines tried under steam AUG. 24. Boilers fixed JUNE 29. Completion of pumping arrangements AUG. 4. Main boiler safety valves adjusted AUG. 29-1922. Thickness of adjusting washers —

Material and tensile strength of Rotor shaft Nickel steel forged 109000, 54000 23 1/2" Identification Mark on Do. 3966. W.W. Material and tensile strength of Generator shaft O.H. steel forged 82500, 41000 23 " Identification Mark on Do. E164. G.D. Material of Thrust shaft O.H. STEEL Identification Mark on Do. 3966 T.G.F. 4001 H. Material of TUBE shafts O.H. STEEL Identification Marks on Do. 3957 T.G.F. 3959 T.G.F. Material of Screw shafts O.H. STEEL Identification Marks on Do. 4000 T.G.F. 4014 T.G.F. Material of Steam Pipes SEAMLESS O.H. STEEL. Test pressure 825 lbs. 0"

Is an installation fitted for burning oil fuel YES. Is the flash point of the oil to be used over 150°F. YES. Have the requirements of Section 49 of the Rules been complied with YES. 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 in casings satisfactory. It has been shipped to Camden N.J. for installation in the vessel. THE MACHINERY & BOILERS HAVE BEEN FASTENED ON BOARD IN A SATISFACTORY MANNER, THE INSTALLATION WAS TRIED UNDER FULL WORKING CONDITIONS ON TRIAL TRIP AND FOUND TO WORK SATISFACTORILY. THE MACHINERY & BOILERS ARE ELIGIBLE, IN MY OPINION, TO BE CLASSED, AND TO HAVE THE RECORD X LMC 9-22, "FITTED FOR OIL FUEL, F.P. ABOVE 150°F 9-22" IN THE REGISTER BOOK.

The amount of Entry Fee \$ 30.00 When applied for, 19. Special 5 New York \$ 283.20 Do 3/5 Phila. \$ 424.80 Donkey Boiler Fee £ Travelling Expenses (if any) \$ 464.40 Do N.Y.K. \$ 22.00 Do Phila. \$ 13.00 Committee's Minute NEW YORK Assigned + LMC-9-22 subject
When received, 21/10/22
TUE. 26 SEP. 1922
William Butler, Engineer Surveyor to Lloyd's Register of Shipping.
Machinery cert. issued 4/12/22
Amended cert. issued 4/12/22