

REPORT ON MACHINERY.

No. 21684

Received at London Office MON. 30 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 Yuline, Generators Motors for the SS Kamoi (Number of Visits 104) Tons { Gross 10222 Net 5704
 Master Built at Banden N.J. By whom built New York S S Corp When built 1922
 Engines made at Schenectady NY By whom made General Electric Coy when made 1922
 Boilers made at Banden N.J. By whom made New York S S Corp when made 1922
 Registered Horse Power 1659 NHP 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

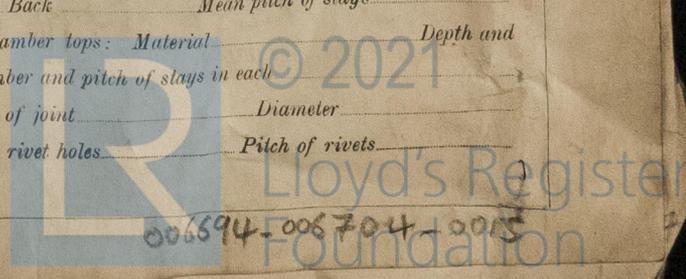
TURBINE ENGINES, &c.—Description of Engines Yuline direct coupled to AC generator No. of Turbines One
 Diameter of Rotor Shaft Journals, FOR R 8" AFT 15" DISTANCE BETWEEN CENTRES OF BEARINGS 8-6 3/4"
 Diameter of GENERATOR SHAFT 15" Distance between Centres of Bearings 12-10 1/2" Diameter of Pitch Circle 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 as per rule 12 3/4" 12.73
 Width of Face — Diameter of Thrust Shaft under Collars 13.75" Diameter of Tunnel Shaft as fitted 14.75 TUBE SHAFT
 No. of Screw Shafts TWO 2 Liners Diameter of same 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 1/4" & 2.175"	4'-6.54"	2						
2ND	1 3/16"	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 1/16"	1						
9th and size of Feed pumps	7 13/16"	5'-8 9/16"	1	TWO MAIN 16"x12"x24" SIMPLEX. ONE AUXIL: 12"x8"x24"					
10th and size of Bilge pumps	13 7/16"	6'-2 1/8"	1	ONE 12"x8"x24" SIMPLEX. ONE 6"x5 3/4"x6" DUPLEX.					
No. and size of Bilge suction in Engine Room	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 —
 plates — 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 — 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 —
 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 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 TH
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 VALV

The foregoing is a correct description, GUARDS, SPRINGS ETC. SEE RPT. 13. FOR SPARE
FOR MAIN GENERATOR AND
MOTORS.

W. L. Wright, Marine Eng Dept Gen Elec Co, Manufacturer.
New York Shipb. Corp. J. B. Crew Engineer.

Aug 20 Oct 2-12-4 Nov 1-73 Dec 9-21 Jan 6-13-15-24 Feb 6-14 Mar 7-14-22-3
 April 13-14 May 7-75 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. Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Casings Jan 13th Rotor Oct 12 Blading Jan 13th Gearing Jan 13th
 Rotor shaft Jan 24 Thrust shaft APR. 10. TUBE MAR. 20. Screw shafts FEB. 17. Propeller MAR. 3-27.
 Stern tube MAR. 27. Steam pipes tested JUL. 20. Aug. 4. Engine and boiler seatings JUNE 9. Engines holding down bolts JUNE 19. - 29
 Completion of pumping arrangements AUG. 4. Boilers fixed JUNE 29. Engines tried under steam AUG. 24.

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 in 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 motor shafts O.H. steel Identification Mark on Do. 5942 M. Material of Thrust shaft O.H. STEEL Identification Mark on Do. 3960 T.G.
 Material of TUBE shafts O.H. STEEL Identification Marks on Do. 3957 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 YOUR OPINION, TO BE CLASSED, AND TO HA
THE RECORD * 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, _____
 Special 5 New York \$ 283.20 _____
Do 3/5 Phila. \$ 424.80 _____
 Donkey Boiler Fee _____ When received, _____
 Travelling Expenses (if any) \$ 464.40 2/10/22
Do N.Y.K. \$ 22.00 _____
Do Phila. \$ 13.00 _____
 Committee's Minute NEW YORK TUE. 26 SEP. 1922

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

MACHINERY CERT.
2/1/22
(dated 9-10-22)
Amended cert
issued
4/12/22

Assigned: + LMC-9-22 subject