

# REPORT ON STEAM TURBINE MACHINERY. No. 3664

4a.

Received at London Office 2 JUN 1942

Date of writing Report Sept. 25 41 When handed in at Local Office 19 Port of Boston, Massachusetts

Place in Survey held at Lynn, Mass. Date, First Survey April 14, 1941 Last Survey June 7, 1941

Reg. Book. Hull No. 1492-3 "Sheldon Clark" (Number of Visits 4)

on the Quincy, Mass. By whom built Bethlehem Steel Co. Yard No. 1492-3 When built 1941

Engines made at General Electric Co. Engine No. 48061 When made 1941

Boilers made at Boiler No. When made

Shaft Horse Power at Full Power Owners Port belonging to

Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which Vessel is intended

## STEAM TURBINE ENGINES, &c.—Description of Engines One turbine connected to 250 KW Generator thru single reduction gears.

No. of Turbines one each single reduction geared to Generators No. of primary pinions to each set of reduction gearing One

Direct coupled to Alternating Current Generator phase periods per second rated 250 Kilowatts 240 Volts at 1200 revolutions per minute;

supplying power for driving Propelling Motors, Type Auxiliary Machinery and Electric lighting

led Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

TURBINE	H. P.			I. 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.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
Impulse	.500	.960	25.5	25.96-2								
D	.504	1.025	25.56	26.18-2								
D	.873	1.045	25.9	26.6-2								
H												
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Shaft Horse Power at each turbine { H.P. 5616 5660 1st reduction wheel  
I.P. Revolutions per minute, at full power, of each Turbine Shaft  
L.P. main shaft 1200

Motor Shaft diameter at journals { H.P. 3" Pitch Circle Diameter { 1st pinion 4.6" 1st reduction wheel  
I.P. 21.7" main wheel  
L.P. 21.7" main wheel

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 5-1/2" & 5-1/2" 1st reduction wheel  
2nd pinion 5-1/2" & 5-1/2" main wheel

Flexible Pinion Shafts, diameter { 1st 2-1/2" x 3-1/2" diameter at bottom of pinion teeth { 1st 4.356  
2nd 2-1/2"

Wheel Shafts, diameter at bearings { 1st 2.5" 2.70 Rule 207 diameter outside of gear { 1st 21.88" Generator Shaft, diameter at bearings  
main 3" Propelling Motor Shaft, diameter at bearings

Intermediate Shafts, diameter as per rule as fitted Thrust Shaft, diameter at collars as per rule as fitted

Tube Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted Is the { tube screw } shaft fitted with a continuous liner {

Bronze Liners, thickness in way of bushes as per rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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 Is an approved Oil Gland or other appliance fitted at the after end of the tube

If two liners are fitted, is the shaft lapped or protected between the liners Length of Bearing in Stern Bush next to and supporting propeller

Propeller, diameter Pitch No. of Blades State whether Moveable Total Developed Surface square feet.

If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine Can the H.P. or I.P. Turbine exhaust direct to the condenser

No. of Turbines fitted with astern wheels Feed Pumps { No. and size How driven

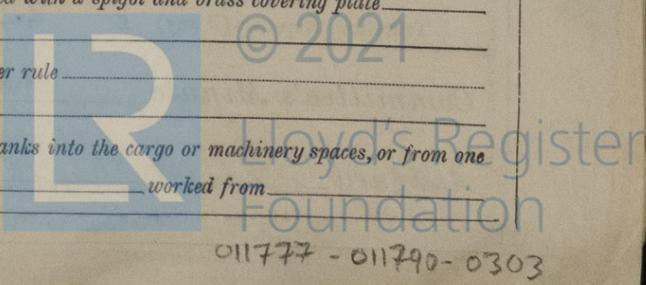
Pumps connected to the Main Bilge Line { No. and size How driven

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room In Pump Room

In Holds, &c. Main Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room

Bilges, No. and size Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes



BOILERS, &c.—(Letter for record ) Total Heating Surface of Boilers

Is Forced Draft fitted No. and Description of Boilers Working Pressure

Is a Report on Main Boilers now forwarded?

Is { a Donkey } Boiler fitted? If so, is a report now forwarded?  
 { an Auxiliary }

Is the donkey boiler intended to be used for domestic purposes only

Plans. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers  
 (If not state date of approval)

Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied (2) L.S. Bearings (2) Pinion Bearings (2) Thrust Bearings  
 (8) H.S. Couplings Bolts (8) Drake Locknuts for H.S. Coupling Bolts (5) 3/4" Bolts for Hor. Cas  
 Joint (2) 3/4" bolts for Hor. Casing Joint.

PER SHIP

The foregoing is a correct description,

General Electric Co / J. Holow Manufacturing

Dates of Survey while building { During progress of work in shops - - April 14 May 23, June 3, 7, 1941  
 { During erection on board vessel - - - }  
 Total No. of visits 4 visits

Dates of Examination of principal parts—Casings June 7, 1941 Rotors June 7, 1941 Blading June 7, 1941 Gearing June 7, 1941

Wheel shaft June 7, 1941 Thrust shaft Intermediate shafts Tube shaft Screw shaft

Propeller Stern tube Engine and boiler seatings Engine holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Rotor shaft, Material and tensile strength O.H. Steel 100,000 lbs. per sq. in. Identification Mark 431 7-6-41

Flexible Pinion Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength O.H. Steel 108,000 lbs. per sq. in. Identification Mark 431 7-6-41

1st Reduction Wheel Shaft, Material and tensile strength Identification Mark

Wheel shaft, Material O.H. Steel Identification Mark 431 7-6-41 Thrust shaft, Material Identification Mark

Intermediate shafts, Material Identification Marks Tube shaft, Material Identification Marks

Screw shaft, Material Identification Marks Steam Pipes, Material Test pressure

Date of test 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 the Rules for the use of oil as fuel been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo If so, have the requirements of the Rules been complied with

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with

Is this machinery a duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) The geared turbine electric generator has been built under special survey, tested under steam at full load and the oil governors adjusted to trip at 1340 RPM. The quality of workmanship and materials is good. The units have been forwarded to Bethlehem Steel Company, Fore River Yard, Quincy, Mass.

The amount of Entry Fee	£	:	:	When applied for,
Special	£	\$ 75.00	:	23-10-41
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	2.50	:	19

Thomas Barrie  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK APR 8 1942

Assigned N.Y.K. RPT. NO. 42277

Certificate (if required) to be sent to... (The Surveyors are requested not to write on or below the space for Committee's Minute.)

