

REPORT ON STEAM TURBINE MACHINERY. No. 3593

t. 4a.

Received at London Office 20 SEP 1941

Date of writing Report May 26, 1941 When handed in at Local Office 5 July 1941 Port of Boston, Mass.
 No. in Survey held at Lynn, Mass. Date, First Survey August 17, 1940 Last Survey December 20, 1940
 Reg. Book. on the Hulls 208, 209, 210 S/S. STANVAC MELBOURNE (Number of Visits 7)
 Built at Chester, Pa. By whom built Sun S. B. Company Yard No. 208-9-10 When built 1940
 Engines made at Lynn, Mass. By whom made General Electric Company Engine No. 47100 When made 1940
 Boilers made at Barberton Ohio By whom made Babcock & Wilcox Boiler No. 1492 When made 1941
 Shaft Horse Power at Full Power 4000 Owners _____ Port belonging to _____
 Nom. Horse Power as per Rule 1006 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 Trade for which Vessel is intended Carrying Petroleum in bulk.

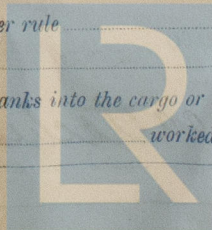
STEAM TURBINE ENGINES, &c.—Description of Engines One Turbine connected to 300 KW Generator thru single reduction gears.
 No. of Turbines One Direct coupled, single reduction geared to Generators No. of primary pinions to each set of reduction gearing One

Direct coupled to Alternating Current Generator phase _____ periods per second _____
 Direct Current Generator _____ rated 300 Kilowatts 240 Volts at 1200 revolutions per minute;
 For supplying power for driving _____ Propelling Motors, Type Auxiliary Machinery & Electric Lighting
 rated _____ 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.
1st Wheel	1.96"	25.5"	25.96"	2								
2nd	1.504"	25.5"	25.90"	2								
3rd	1.374"	26.37"	26.65"	26.76"	2							
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Shaft Horse Power at each turbine { H.P. _____ I.P. _____ L.P. _____ }
 Reolutions per minute, at full power, of each Turbine Shaft { H.P. 5636 1st reduction wheel
 I.P. _____ main shaft 1200
 L.P. _____
 Rotor Shaft diameter at journals { H.P. 3 1/2" Pitch Circle { 1st pinion 5.4414" 1st reduction wheel
 I.P. _____ Diameter { 2nd pinion _____ main wheel 25.5585" Width of Face { 1st reduction wheel
 L.P. _____ { 1st pinion 6-578" & 7-5/8" 1st reduction wheel
 2nd pinion _____ main wheel 6-3/4"
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st _____ 2nd _____
 Flexible Pinion Shafts, diameter { 1st _____ 2nd _____ }
 Pinion Shafts, diameter at bearings Solid 1st _____ 2nd _____ diameter at bottom of pinion teeth { 1st 5.0664"
 2nd _____
 Wheel Shafts, diameter at bearings { 1st 4" diameter at wheel shroud, Outside of gear { 1st 25.827" Generator Shaft, diameter at bearings 3 1/2"
 main _____ 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 _____ If two liners are fitted, is the shaft lapped or protected between the liners _____ Is an approved Oil Gland _____
 or other appliance fitted at the after end of the tube shaft _____ 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 L.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 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 _____
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges _____
 Are all Sea Connections fitted direct on the skin of the ship _____ Are they fitted with Valves or Cocks _____
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the Overboard Discharges 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 pass through the bunkers _____ How are they protected _____
 What pipes pass through the deep tanks _____ Have they been tested as per rule _____
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times _____
 Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another _____ Is the Shaft Tunnel watertight _____ Is it fitted with a watertight door _____



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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 ☐ an Auxiliary Boiler fitted?

If so, is a report now forwarded?

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

Main Boilers.

Auxiliary Boilers.

Donkey Boilers.

Superheaters

General Pumping Arrangements

Oil Fuel Burning Arrangements

Spare Gear. State the articles supplied. — Two gear and two pinion bearings, one thrust bearing, fourteen coupling bolts, Six turbine casing bolts. 1 turbine bearing.

The foregoing is a correct description,

General Electric Co. J. T. Nolan

Manufacturer

Dates of Survey while building

During progress of work in shops -- Aug. 17 - 19. Sept. 23. Oct. 11 - 22. Dec. 19 - 20, 1940

During erection on board vessel --

seven

Dates of Examination of principal parts—Casings December 20 Rotors December 20 Blading December 20 Gearing December 20,

Wheel shaft December 20 Thrust shaft Intermediate shafts Tube shaft Screw shaft

Propeller Stern tube Engine and boiler seatings Engine holding down bolts

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 93,000 lbs. per. sq. in. Identification Mark 343 20-12-40

Flexible Pinion Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength " " 97,000 " " " " Identification Mark 343 20-12-40

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

Wheel shaft, Material OH Steel Identification Mark 343 20-12-40 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

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 Sun Shipbuilding Company, Chester, Pa.

This generating set has been properly installed on board the vessel tried out under full power & found satisfactory.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ 75.00 : May 26, 1941
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

Assigned See attached First Entry Report

NEW YORK AUG 13 1941



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