

AUXILIARY
REPORT ON STEAM TURBINE MACHINERY. No. 3598

pt. 4a. Received at London Office 4 NOV 1941

Date of writing Report May 26, 1941 When handed in at Local Office Port of Boston, Mass.

No. in Survey held at Lynn, Mass. Chester Pa Date, First Survey July 17, 1940 Last Survey Feb. 25, 1941

Reg. Book. on the Hulls 208, 209, 210. S/S STANVAC WELLINGTON (Number of Visits) Tons 10013
6397

Built at Chester, Pa. By whom built Sun S. B. Company Yard No. 208-9-10 When built 1941

Engines made at Lynn, Mass. By whom made General Electric Co. Engine No. 47105 When made 1941

Boilers made at Barberton Ohio By whom made Babcock & Wilcox Boiler No. 1494-1-2 When made "

Shaft Horse Power at Full Power 4000 Owners Petroleum Shipping Co Port belonging to Panama

Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

Trade for which Vessel is intended Carrying Petroleum in bulk.

TEAM 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 propelling shafts. No. of primary pinions to each set of reduction gearing one

direct coupled to Alternating Current Generator phase Direct Current Generator periods per second 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 EXPANSION	1.96"	25.5"	2									
2nd	1.504"	25.54"	2									
3rd	1.374"	26.65"	2									
4th												
5th												
6th												
7th												
8th												
9th												
10th												
11th												
12th												

Shaft Horse Power at each turbine H.P. 5636 1st reduction wheel

 I.P. revolutions per minute, at full power, of each Turbine Shaft I.P. 1200 main shaft

 L.P.

Rotor Shaft diameter at journals H.P. 3 1/2" Pitch Circle 5.4414" 1st pinion 1st reduction wheel Width of Face 1st reduction wheel

 I.P. Diameter 25.5585" main wheel main wheel 7 1/2"

 L.P. 2nd pinion main wheel

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 6-5/8" & 7-5/8" 1st reduction wheel

 2nd pinion main wheel 6-3/4"

Flexible Pinion Shafts, diameter 1st Pinion Shafts, diameter at bearings External 4" 1st 2nd diameter at bottom of pinion teeth 5.0664"

 Internal 2nd

Wheel Shafts, diameter at bearings 1st 4" diameters at wheel shroud, 25.827" Generator Shaft, diameter at bearings 3 1/2"

 main Outside of gear main Propelling Motor Shaft, diameter at bearings

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

 as fitted as fitted as fitted as fitted

Screw Shaft, diameter as per rule Is the tube shaft fitted with a continuous liner Bronze Liners, thickness in way of bushes as per rule

 as fitted as fitted as fitted as fitted

Thickness between bushes as per rule 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 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 Holds, &c. Independent Power Pump Direct Suctions to the Engine Room

Main Water Circulating Pump Direct Bilge Suctions, No. and size Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Bilges, No. and size 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 worked from

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 }

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

PER SHIP

The foregoing is a correct description,

General Electric Co. J. T. Nolan Manufacturer

Dates of Survey while building { During progress of work in shops -- } July 17, Aug. 26, Oct. 4, 11, 22, 1940, February 24, 25, 1941
 { During erection on board vessel --- }
 Total No. of visits **Seven**

Dates of Examination of principal parts—Casings **February 25** Rotors **February 25** Blading **February 25** Gearing **February 25**

Wheel shaft **February 25** 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 99,000 lbs. per. sq. in.** Identification Mark **365 25-2-41**

Flexible Pinion Shaft, Material and tensile strength _____ Identification Mark _____

Pinion shaft, Material and tensile strength " " **102,000** " " " " Identification Mark **365 25-2-41**

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

Wheel shaft, Material **O.H. Steel** Identification Mark **365 25-2-41** 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 _____

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.**

These units have been satisfactorily installed on board the vessel, tried out under full power with satisfactory results.

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 Larrie W. Cunham
 Engineer Surveyor to Lloyd's Register of Shipping.

NEW YORK OCT 1 1941 *J.F.J.*

Committee's Minute

Assigned *See Phil. Rpt. NO. 8120*



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