

# AUXILIARY REPORT ON STEAM TURBINE MACHINERY. No. 3597

Received at London Office 4 NOV 1941

Date of writing Report May 26 41 When handed in at Local Office 10 Port of Boston, Mass.  
 No. in Survey held at Lynn, Mass. Chester, Pa Date, First Survey July 2, 1940 Last Survey Feb. 21, 1941  
 Reg. Book. on the Hulls 208, 209, 210 S/S STANVAC WELLINGTON (Number of Visits 8) Tons { Gross 10013 Net 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. 47104 When made 1941  
 Boilers made at Burberton Ohio By whom made Babcock & Wilcox Boiler No. 144,112 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

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 Generator propelling shafts No. of primary pinions to each set of reduction gearing One  
 direct coupled to { Alternating Current Generator phase 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 Wheel	<u>.96"</u>	<u>25.5"</u>	<u>25.96"</u>	<u>2</u>								
2nd	<u>.504"</u>	<u>1.03"</u>	<u>25.5"</u>	<u>25.90"</u>	<u>2</u>							
3rd	<u>1.374"</u>	<u>2.37"</u>	<u>26.65"</u>	<u>26.76"</u>	<u>2</u>							
4th												
5th												
6th												
7th												
8th												
9th												
10th												
11th												
12th												

Shaft Horse Power at each turbine { H.P. 5636 1st reduction wheel I.P. 1200 main shaft L.P. " }  
 Revolutions per minute, at full power, of each Turbine Shaft { H.P. 5636 1st reduction wheel I.P. 1200 main shaft L.P. " }  
 Rotor Shaft diameter at journals { H.P. 3 1/2" Pitch Circle Diameter { 1st pinion 5.4414" 1st reduction wheel Width of Face { 1st reduction wheel 7 1/2" main wheel 25.5585" 2nd pinion 6-5/8" & 7-5/8" 1st reduction wheel main wheel 6-3/4" }  
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 4" 1st reduction wheel diameter at bottom of pinion teeth { 1st 5.0664" 2nd " }  
 Flexible Pinion Shafts, diameter { 1st 4" Pinion Shafts, diameter at bearings { 25.827" Generator Shaft, diameter at bearings 3 1/2" }  
 Wheel Shafts, diameter at bearings { 1st 4" diameter at wheel shroud, 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 " }  
 Screw Shaft, diameter { as per rule " Is the { tube screw } shaft fitted with a continuous liner { " Bronze Liners, thickness in way of bushes { as per rule " }  
 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 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?  
{ an Auxiliary }

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, one turbine bearing.

PER SHIP

The foregoing is a correct description,

General Electric Co./J.T. Zolan Manufacturer

Dates of Survey while building { During progress of work in shops - - } July 2, June 12, Aug. 5, Sept. 23, Oct. 2, 11, February 19, 21, 1941  
{ During erection on board vessel - - - }  
Total No. of visits. Eight

Dates of Examination of principal parts—Casings February 21, Rotors February 21, Blading February 21, Gearing February 21

Wheel shaft February 21, 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 96,000 lbs. per. sq. in. Identification Mark 361 21-2-41

Flexible Pinion Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength O.H. Steel 96,750 " " " " Identification Mark 361 21-2-41

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

Wheel shaft, Material O.H. Steel Identification Mark 361 21-2-41 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.

This unit has been satisfactory 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 H. Runkham  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See Pl. Kt. No. 8120.

NEW YORK OCT 1 1941 848



© 2021

Lloyd's Register Foundation