

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. S/S STANVAC WELLINGTON (Number of Visits 8) Tons Gross 10013
on the Hulls 208, 209, 210 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 | .96" | 25.5" | 25.96" | | | | | | | | | |
| 2nd Wheel | 1.504" | 25.5" | 25.90" | | | | | | | | | |
| 3rd Wheel | 1.374" | 26.65" | 26.76" | | | | | | | | | |
| 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. "

Rotor Shaft diameter at journals { H.P. 3 1/2" Pitch Circle Diameter { 1st pinion 5.4414" 1st reduction wheel
 I.P. " main wheel 25.5585" Width of Face { 1st reduction wheel
 L.P. " 2nd pinion 6-5/8" & 7-5/8" main wheel 7 1/2"

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 6-3/4" main wheel

Flexible Pinion Shafts, diameter { 1st 4" Pinion Shafts, diameter at bearings { Solid 1st 4" 2nd 5.0664"
 2nd " External 1st 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 25.827" 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 "

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 "
 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 "
 as fitted " 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 "

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 "

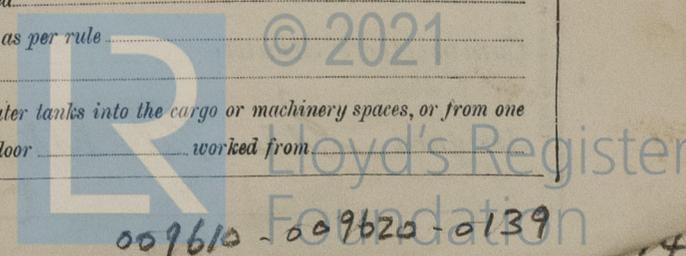
In Holds, &c. " Main Water Circulating Pump Direct Bilge Suctions, No. and size " Independent Power Pump Direct Suctions to the Engine Room "

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 " 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. 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 Barrie H. Runkham
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK OCT 1 1941 958

Assigned *See Pl. Rpt. No. 8170.*



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