

AUXILIARY
REPORT ON STEAM TURBINE MACHINERY. No. 9433

Rpt. 4a. Date of writing Report 16 Mar. 1950 When handed in at Local Office 16 Mar. 1950 Port of PHILADELPHIA, PA. Received at London Office 11 APR 1950

No. in Survey held at Chester, Pa. Date, First Survey 6th Sept., 1949 Last Survey 15th Feb., 1950. Reg. Book. on the S.S. "SOVAC DAYLIGHT" (Number of Visits five)

Built at Chester, Pa. By whom built Sun S.B. & D.D.Co. Yard No. 575 When built 1949-50
Engines made at Essington, Pa. By whom made Westinghouse E. & M.Co. Engine No. 5A2148-24 When made 1949
Boilers made at Barberton, Ohio By whom made Babcock & Wilcox Co. Boiler No. MB-4343 When made "
Shaft Horse Power at Full Power 12,500 Owners Tankers Navigation Co. Port belonging to Panama
Nom. Horse Power as per Rule 3096 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
Trade for which Vessel is intended Foreign

STEAM TURBINE ENGINES, &c.—Description of Engines 2 - Turbo driven 300 K.W. generating sets.

No. of Turbines Ahead 1 Astern 1
single reduction geared } to 1 propelling shafts. No. of primary pinions to each set of reduction gearing 1
Direct coupled to D.C. Generator phase periods per second } rated 300 Kilowatts 240 Volts at 1200 revolutions per minute;
for supplying power for driving Ship's electrical gear.
rated Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

| TURBINE BLADING. | 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 | .933 | 25.496 | | | | | | | | | | |
| 2ND | 1.400 | 25.745 | | | | | | | | | | |
| 3RD | 1.820 | 25.939 | | | | | | | | | | |
| 4TH | | | | | | | | | | | | |
| 5TH | | | | | | | | | | | | |
| 6TH | | | | | | | | | | | | |
| 7TH | | | | | | | | | | | | |
| 8TH | | | | | | | | | | | | |
| 9TH | | | | | | | | | | | | |
| 10TH | | | | | | | | | | | | |
| 11TH | | | | | | | | | | | | |
| 12TH | | | | | | | | | | | | |

Shaft Horse Power at each turbine { H.P. 300 KW } { H.P. 5930 }
I.P. { } I.P. { }
L.P. { } L.P. { }
Revolutions per minute, at full power, of each Turbine Shaft { }
1st reduction wheel 1200
main shaft

Rotor Shaft diameter at journals { H.P. 2 1/2" } { } { }
I.P. { } I.P. { }
L.P. { } L.P. { }
Pitch Circle Diameter { 1st pinion 5.063" } { 1st reduction wheel 25.009" } { Width of Face { 1st reduction wheel 6.000" }
2nd pinion main wheel { } { main wheel { }
main wheel { } { main wheel { }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 5.594" } { 1st reduction wheel }
2nd pinion main wheel 5.594" { }

Flexible Pinion Shafts, diameter { 1st } { } { }
2nd { } { } { }
Pinion Shafts, diameter at bearings External 1st { 2.495" } { } { }
Internal 1st { } { } { }
2nd { } { } { }
diameter at bottom of pinion teeth { 1st 4.833" }
2nd { } { } { }

Wheel Shafts, diameter at bearings { 1st 3.990" } { diameter at wheel shroud, { 1st 25.209" } { Generator Shaft, diameter at bearings 3.990" }
main { } { main { } { Propelling Motor Shaft, diameter at bearings { }

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

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

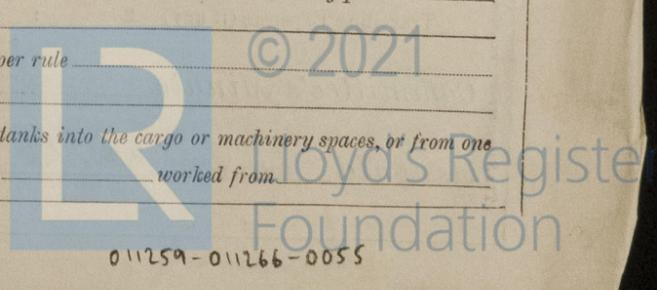
Bronze Liners, thickness in way of bushes as per rule { } { Thickness between bushes as per rule { }
as fitted { } { as fitted { }
Is the after end of the liner made watertight in the propeller boss { }
If the liner is in more than one length are the junctions made by fusion through the whole thickness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

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 sized 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

Is a Report on Main Boilers now forwarded? Working Pressure

Is a Donkey Boiler fitted? If so, is a report now forwarded?

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

Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements

Has the spare gear required by the Rules been supplied SPARE GEAR.

State the principal additional spare gear supplied Rule Requirements.

The foregoing is a correct description,

Dates of Survey while building: During progress of work in shops -- 8, 10th September, 1949; During erection on board vessel --- 11th, 23rd January, 15th February, 1950; Total No. of visits Five

Dates of Examination of principal parts—Casings 8th Sept. Rotors 8th Sept. Blading 8th Sept. Gearing 8th Sept.

Wheel shaft 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 Identification Mark

Flexible Pinion Shaft, Material and tensile strength Identification Mark

Pinion shaft, Material and tensile strength O.H. Steel Identification Mark

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

Wheel shaft, Material Identification Mark 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 yes If so, state name of vessel S.S. "SOVAC PEGASUS" - Hull 57

General Remarks (State quality of workmanship, opinions as to class, &c.) These turbines were built under the survey of

the A.B.S. and are war surplus stock modified to suit the steam conditions of the vessel, in ac-

cordance with the approved plans. They have been satisfactorily installed on board the vessel,

tried out under full power and found satisfactory. Megger tests and high potential tests were

carried out and found to be within the Requirements of the A.I.E.E.

Please see Rpt.10 attached.

The amount of Entry Fee ... See other ... When applied for, 1 Mar. 1950 per F.A.G. When received, 19...

Signature of Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Assigned See First Entry Rept. attached. NEW YORK MAR 22 1950



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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.)