

Rpt. 4a.

REPORT ON STEAM TURBINE MACHINERY. No. 9433

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 Tons } Gross 17597.94
Engines made at Essington, Pa. By whom made Westinghouse E. & M.Co. Engine No. 5A2148-24 When built 1949-50
Boilers made at Barberton, Ohio By whom made Babcock & Wilcox Co. Boiler No. MB-4343 When made 1949

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 ~~Direct coupled~~ single reduction geared to 1 ~~propelling~~ shafts. No. of primary pinions to each set of reduction gearing 1direct coupled to ~~Direct Current Generator~~ phase periods per second } rated 300 Kilowatts 240 Volts at 1200 revolutions per minute;
for supplying power for driving ~~propelling motor~~, Type 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
I.P. { Revolutions per minute, at full power, of each Turbine Shaft { H.P. 5930
L.P. { 1st reduction wheel 1200Rotor Shaft diameter at journals { H.P. 2 1/2" Pitch Circle { 1st pinion 5.063" 1st reduction wheel 25.009" Width of { 1st reduction wheel 6.000"
I.P. { Diameter { 2nd pinion main wheel main wheel {
L.P. {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 { 1st Pinion Shafts, diameter at bearings External 2.495" 2nd { diameter at bottom of pinion teeth { 1st 4.833"
Shafts, diameter { 2nd Internal 1st { 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 bearingsIntermediate Shafts, diameter as per rule Thrust Shaft, diameter at collars as per rule
as fitted as fittedTube Shaft, diameter as per rule Screw Shaft, diameter as per rule Is the { tube } shaft fitted with a continuous liner {
as fitted as fitted screwBronze 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
as fitted as fitted

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 drivenPumps 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

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

Is a Report on Main Boilers now forwarded?

Working Pressure

Is a Donkey Boiler fitted?
(an Auxiliary)

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 Shipping
(If not state date of approval)

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 accordance 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
Special ... Rpt.4a.
Donkey Boiler Fee ...
Travelling Expenses (if any) ...
When applied for, 1 Mar. 1950 per F.A.G.
When received, 19.

Committee's Minute

Assigned See First Entry Rpt. attached.

NEW YORK MAR 22 1950

Engine Surveyor to Lloyd's Register of Shipping.



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