

AUXILIARY REPORT ON STEAM TURBINE MACHINERY. No. 9401

Received at London Office 1 APR 1950

Report 10 Jan. 1949 When handed in at Local Office 10 Jan. 1950 Port of PHILADELPHIA, PA.
Survey held at Essington, Pa. Date, First Survey 28 Feb. Last Survey 15 Dec. 1949
(Number of Visits 5)
Tons { Gross 17597.94
Net -
on the S.S. "SOVAC BRILLIANT"
Chester, Pa. By whom built Sun Shipbldg. & D.D. Co. Yard No. 573 When built 1949
made at Essington, Pa. By whom made Westinghouse Electric Corp. Engine No. 5A-1124-50 When made 1949
made at Barberton, Ohio By whom made Babcock & Wilcox Co. Boiler No. MB-4341 When made 1949
Horse Power at Full Power 12,500 Owners Tankers Navigation Corporation Port belonging to Panama
Horse Power as per Rule 3096 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
for which Vessel is intended Foreign

AM TURBINE ENGINES, &c. — Description of Engines 2-Turbo driven 300 KW generating sets.

Turbines Ahead 1 ~~XXXXXXXXXX~~ single reduction geared } to 1 ~~XXXXXXXXXX~~ shafts. No. of primary pinions to each set of reduction gearing 1
Astern DC ~~XXXXXXXXXX~~
Coupled to { Alternating Current Generator - phase - periods per second } rated 300 Kilowatts 240 Volts at 1200 revolutions per minute;
Direct Current Generator
Supplying power for driving ~~XXXXXXXXXX~~ type Ships Electric gear
Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

| | 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. |
| EXPANSION | .933 | 25.496 | | | | | | | | | | |
| L-5 | 1.400 | 25.745 | | | | | | | | | | |
| 949 | 1.820 | 25.939 | | | | | | | | | | |
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Horse Power at each turbine { H.P. 300 KW
I.P.
L.P.
Revolutions per minute, at full power, of each Turbine Shaft { H.P. 5930 1st reduction wheel 1200
I.P.
L.P. main shaft
Shaft diameter at journals { H.P. 2-1/2" Pitch Circle { 1st pinion 5.063" 1st reduction wheel 26.009" Width of { 1st reduction wheel 6.000"
I.P. Diameter { 2nd pinion main wheel Face { main wheel
L.P. { 2nd pinion main wheel 5.594"

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"

Pinion Shafts, diameter at bearings { 1st 2.495" 2nd { diameter at bottom of pinion teeth { 1st 4.833"
2nd { Internal
Pinion 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 Tube Shaft, diameter as per rule
as fitted as fitted as fitted

Low 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

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
as fitted 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
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

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.

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 Lubricating Oil Pumps, including Spare Pump, No. and size
Last Pumps, No. and size Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Two independent means arranged for circulating water through the Oil Cooler
Pumps, No. and size:—In Engine and Boiler Room

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
Are they fitted with Valves or Cocks

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 the Overboard Discharges above or below the deep water line

Are all Sea Connections fitted direct on the skin of the ship Are the Blow Off Cocks fitted with a spigot and brass covering plate
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel How are they protected
Have they been tested as per rule

Do all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
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 }
an Auxiliary } Boiler fitted?

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:—

Rule Requirements

The foregoing is a correct description,

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Dates { During progress of } 28 Feb., 1 Mar., 1949
of Survey { work in shops - - }
while { During erection on } 5, 12, 15 Dec., 1949
building { board vessel - - }
Total No. of visits 5

Dates of Examination of principal parts—Casings 1 March, 1949 Rotors 1 March, 1949 Blading 1 March, 1949 Gearing 1 March, 1949

Wheel shaft 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 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

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. 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. Meggar tests were carried out and found to be within the

Society's Requirements.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ See other : 4 Jan 1950
Donkey Boiler Fee ... £ Rpt. 4a : per F.A.G.
Travelling Expenses (if any) £ : : When received,
19

Engine Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK MAR 8 - 1950

Assigned See first entry report attached



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Foundation