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Rpt. 4a.

REPORT ON STEAM TURBINE MACHINERY.

No. 9910

Date of writing Report 12th Dec., 1952 When handed in at Local Office 12th Dec., 1952 Port of PHILADELPHIA, PA.
No. in Survey held at Trenton, New Jersey Date, First Survey 13th Nov., Last Survey 3rd December, 1952
Reg. Book on the Generator Turbines S.S. ANDROS ISLAND (Number of Visits five)
Built at Quincy, Mass. By whom built Bethlehem Steel Co. Yard No. 1631 Tons { Gross
Turbines & Gears Trenton, N.J. By whom made De Laval Steam Turb. Co. Engine No. 650600/1 When built 1952
Boilers made at By whom made Boiler No. When made "
Shaft Horse Power at Full Power Owners Orion Shipping Company Port belonging to
Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes
Trade for which Vessel is intended Carrying petroleum in bulk.

STEAM TURBINE ENGINES, &c.—Description of Engines 400 K.W. A.C. Turbo Generators (2 units per ship)

No. of Turbines Ahead one ~~XXXXXX~~ single reduction geared } to one Generator.
direct coupled to { Alternating Current Generator 3 phase 60 periods per second } rated 400 Kilowatts 450 Volts at 1200 revolutions per minute;
for supplying power for driving ~~XXXXXX~~ Ship's auxiliaries

TURBINE BLADING.

	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 1st row	.550"	21.106"										
2ND " 2nd "	.890"	23.586"										
3RD " "	.840"	23.736"										
4TH " "	.540"	23.126"										
5TH " "	.840"	23.736"										
6TH " "	1.580"	24.226"										
7TH " "	2.450	24.866"										
8TH " "												
9TH " "												
10TH " "												
11TH " "												
12TH " "												

Shaft Horse Power at each turbine { H.P. -
I.P. -
L.P. - } Revolutions per minute, at full power, of each Turbine Shaft { 5905 } ~~XXXXXX~~ reduction wheel 1200

Rotor Shaft diameter at journals ~~XXXX~~ 2.495 Pitch Circle Diameter { ~~XXXXXX~~ pinion 5.811 } ~~XXXXXX~~ reduction wheel 28.593 Width of Face { ~~XXXXXX~~ } ~~XXXXXX~~ reduction wheel 6-1/2"

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 5-7/8" } ~~XXXXXX~~ reduction wheel 6-3/16"

Flexible Pinion Shafts, diameter { 1st - } Pinion Shafts, diameter at bearings External 1st { 2-1/2" } 2nd { } diameter at bottom of pinion teeth { ~~XXXX~~ } 5.573"

Wheel Shafts, diameter at bearings { ~~XXXX~~ 4.494" } diameter at wheel shroud, { ~~XXXX~~ } Generator Shaft, diameter at bearings 5.378"

Intermediate Shafts, diameter as per rule as fitted Thrust Shaft, diameter at collars as per rule as fitted Propelling Motor Shaft, diameter at bearings

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

Thickness between bushes as per rule 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 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. Can the H.P. or I.P. Turbine exhaust direct to the

If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine 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 Pumps, No. and size:—In Engine and Boiler Room Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

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

cc: Quincy Surveyor.

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