

Auxiliary

Report on Steam Turbine Machinery.

N.Y.K. No. 53551

Rpt. 4a.

Date of writing Report Oct. 7th 1954 When handed in at Local Office 19 Port of NEW YORK Received at London Office 4-DEC-1954
 No. in Survey held at Quincy, Mass. Date, First Survey July 5th Last Survey Oct. 7th 1954
 Reg. Book Quincy, Mass. (Number of Visits cont.)
 on the steel, screw steamer "Master Peter" Tons {Gross 18,763
 Net 11,609
 Built at Quincy, Mass. By whom built Bethlehem Steel Co. Yard No. 1635 When built 1954
 Engines made at Essington, Pa. By whom made Westinghouse Elect. S.B. Div. Engine No. 344 When made 1954
 Boilers made at Carteret, N.J. By whom made Foster Wheeler Corp. Boiler No. 3698+9 When made 1954
 Shaft Horse Power at Full Power ✓ Owners Bilbao Compania Naviera S.A. Port belonging to Panama R.P.
 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 Tanker

STEAM TURBINE ENGINES, &c.—Description of Engines 400 K.W. Geared Turbine Generator Set (2 off)
 No. of Turbines one Direct coupled, single reduction geared generator to one propelling shafts. No. of primary pinions to each set of reduction gearing one
 direct coupled to Alternating Current Generator 3 phase 60 periods per second, rated 400 Kilowatts 440 Volts at 1200 revolutions per minute;
 for supplying power for driving Propelling Motors Type Auxiliary Machinery & Lighting
 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.
Impulse Blading { No. of rows	<u>8</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
Reaction Blading { No. of stages	<u>-</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
Reaction Blading { No. of rows in each stage	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>

Shaft Horse Power at each turbine H.P. 9018 1st reduction wheel 1200 main shaft 1200
 Revolutions per minute, at full power, of each Turbine Shaft H.P. 1200

Rotor Shaft diameter at journals H.P. 2" Pitch Circle Diameter { 1st pinion 1st reduction wheel 2nd pinion main wheel 29.446" Width of Face { 1st reduction wheel 10" main wheel 10"

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 6 13/16" 2nd pinion main wheel 6 13/16" 1st reduction wheel 3.7079"

Flexible Pinion Shafts, diameter at bearings { 1st 2 3/4" External 2nd diameter at bottom of pinion teeth Internal 1st 4" 2nd Generator Shaft, diameter at bearings 4"

Wheel Shafts, diameter at bearings { 1st 4" diameter at wheel shroud, 2nd Propelling Motor Shaft, diameter at bearings as per rule Thrust Shaft, diameter at collars as fitted

Tube Shaft, diameter as per rule Screw Shaft, diameter 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 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 Total Developed Surface square feet

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. Turbines 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 Suctions, connected both to Main Bilge Pumps and Auxiliary

Ballast Pumps, No. and size Oil Cooler In Pump Room
 Are two independent means arranged for circulating water through the 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 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 21,130 sq. ft.
 Is Forced Draft fitted Yes No. and Description of Boilers 2-7" type Foster Wheeler Working Pressure 675 lbs./sq. in.

Is a Report on Main Boilers now forwarded? Yes

NOTE—The words which do not apply should be deleted. If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

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Is a Donkey Boiler fitted? If so, is a report now forwarded? _____
 an Auxiliary Boiler fitted? _____
 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 _____
 (If not, state date of approval) _____
 Superheaters _____ General Pumping Arrangements _____ Oil Fuel Burning Arrangements _____
 Geared turbines situated aft. Have torsional vibration characteristics of system been approved _____ Date of approval _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied? _____

State the principal additional spare gear supplied _____

The foregoing is a correct description.

M. J. Sullivan

Dates of Survey while building: During progress of work in shops - - - *continuous*
 During erection on board vessel - - - *continuous*
 Total No. of visits _____

Dates of Examination of principal parts—Casings _____ Rotors _____ Blading _____ Gearing _____
 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 *675 lbs/□"* Thickness of adjusting washers _____

Rotor shaft, Material and tensile strength *please see Philadelphia report No. 10140.* Identification Mark _____

Flexible Pinion Shaft, Material and tensile strength _____ Identification Mark _____

Pinion shaft, Material and tensile strength _____ Identification Mark _____
 _____; Chemical analysis _____

If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment _____ 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 Chryssi*

General Remarks. (State quality of workmanship, opinions as to class, &c.) *These turbo-generators have been under special survey, in accordance with approved plans, examined at installation on vessel and on completion, examined under working conditions and found to be satisfactory.*

In my opinion, the above described turbo-generators are suitable included with the machinery of vessel classed with this Society.

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

The amount of Entry Fee ...	:	:	When applied for.
Special ...	:	:	19
Donkey Boiler Fee ...	:	:	When received.
Travelling Expenses (if any)	:	:	19

Committee's Minute *NEW YORK NOV 17 1954*
 Assigned *see attached 1st entry report*

W. S. Holmes

Engineer Surveyor to Lloyd's Register of Shipping



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If not, state whether, and when, one will be sent? _____
 Is a Report also sent on the Hull of the Ship? _____
 NOTE.—The words which do not apply should be deleted.