

REC'D NEW YORK JUL 23 1954

# Report on Steam Turbine Machinery. No. 1695

Rpt. 4a.

Date of writing Report July 26, 1954 When handed in at Local Office 19 Port of Cleveland, Ohio Received at London Office 4-DEC-1954  
No. in Survey held at Milwaukee, Wisconsin Date, First Survey May 26th Last Survey May 27th, 1954  
Reg. Book S.S. MASTER PETER (Number of Visits 2)  
on the MAIN PROPULSION GEAR FOR BULK OIL CARRIER Tons (Gross - Net -)  
Built at Quincy, Mass By whom built Bethlehem Steel Co Yard No. 1635 When built -  
Engines made at - By whom made - Engine No. - When made -  
Boilers made at Milwaukee, Wis. By whom made Falk Corporation Boiler No. - When made 1954  
Shaft Horse Power at Full Power 13600 Owners Orion Shipping Company Port belonging to -  
Nom. Horse Power as per Rule - Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -  
Trade for which Vessel is intended -

## STEAM TURBINE ENGINES, &c.—Description of Engines.

No. of Turbines ~~Ahead~~ ~~Astern~~ ~~Direct coupled~~ ~~single reduction geared~~ ~~double reduction geared~~ to One propelling shafts. No. of primary pinions to each set of reduction gearing -  
direct coupled to Alternating Current Generator - phase - periods per second - rated - Kilowatts - Volts at - revolutions per minute;  
for supplying power for driving - Propelling Motors, Type -  
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				
Reaction Blading				
No. of rows				
No. of stages				
No. of rows in each stage				

Shaft Horse Power at each turbine { H.P. 6150 I.P. - L.P. 7450 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. 4773 I.P. - L.P. 2673 }  
Rotor Shaft diameter at journals { H.P. - I.P. - L.P. - } Pitch Circle Diameter { 1st pinion 23.308" 2nd pinion 23.308" } 1st reduction wheel 69.304" main wheel 166.554" Width of Face { 1st reduction wheel 10.875" x 2 main wheel 20" x 2 }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 35.5; 36" 2nd pinion 38.75" } 1st reduction wheel 11.687" main wheel 30.25"  
Flexible Pinion Shafts, diameter { 1st - 2nd - } Pinion Shafts, diameter at bearings { H.P. 6.986" I.P. 8.983" L.P. 17.975" } 2nd 17.975" diameter at bottom of pinion teeth 2nd 19.813"

Wheel Shafts, diameter at bearings { 1st 17.975" main 22.477" } Integral diameter at wheel shroud { 1st 65.59" main 166.95" } Generator Shaft, diameter at bearings - Propelling Motor Shaft, diameter at bearings -

Intermediate Shafts, diameter as per rule - as fitted - Thrust Shaft, diameter at collars as per rule - as fitted 22.477"

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

Bronze Liners, thickness in way of bushes 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 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. 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 - }

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 both to 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 - Working Pressure -

Is a Report on Main Boilers now forwarded? -

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.

2m. 8. 70. T.



Is { a Donkey Boiler fitted? - If so, is a report now forwarded? -  
{ an Auxiliary }  
Is the donkey boiler intended to be used for domestic purposes only -  
Plans. Are approved plans forwarded herewith for Shafting Gears 1-7-53 at NY 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. Rule Requirements  
State the principal additional spare gear supplied.

Copies of this report sent to London, New York and Quincy.  
NOTE: Three minor sand deposits found on the side flange inner circumference of the main  
These were cleaned out and are not considered to be of any consequence.

The foregoing is a correct description.

Dates of Survey while building { During progress of work in shops - - May 26, 27, 1954  
{ During erection on board vessel - - -  
Total No. of visits. 2

Dates of Examination of principal parts—Casings. - Rotors. - Blading. - Gearing. 5-27-54  
Wheel shaft. 5-27-54 Thrust shaft. 5-27-54 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. - Identification Mark. -  
Flexible Pinion Shaft, Material and tensile strength. - Identification Mark. -  
Pinion shaft, Material and tensile strength. O. H. Forged Steel Identification Mark. LLOYDS

; Chemical analysis -  
If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment. - LLOYDS  
1st Reduction Wheel Shaft, Material and tensile strength. O. H. Forged Steel Identification Mark. LLOYDS

Wheel shaft, Material. OH Steel Identification Mark. LLOYDS 606 Thrust shaft, Material. OH Steel Identification Mark. LL  
Intermediate shafts, Material. - Identification Marks. - Tube shaft, Material. - Identification Marks. -  
Screw shaft, Material. - Identification Marks. - Steam Pipes, Material. - Test pressure. -

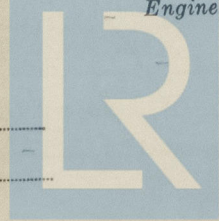
Date of test. - Is an installation fitted for burning oil fuel. -  
Is the flash point of the oil to be used over 150°F. - Have the requirements of the Rules for the use of oil as fuel been complied with. -  
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. - If so, have the 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. Quincy Hulls 1630/32

General Remarks. (State quality of workmanship, opinions as to class, &c.) This set of main propulsion gears was built under survey and to approved plans, the materials, having been tested by the Surveyors and workmanship found of good quality throughout (see note above). It was tested under load ahead and astern with satisfactory results. It was then completely dismantled and all components visually examined and found in satisfactory condition. It is therefore recommended that the unit be incorporated in the vessel's record of \*LMC (with date) subject to it being installed aboard and tested under working conditions all to the satisfaction of the Society's Surveyors.

Arranged fee to be charged on completion of vessel.

The amount of Entry Fee ... : : When applied for.  
Special ... : : 19 FOR: J. F. Kline and R. S. Hagen  
Donkey Boiler Fee ... : : When received.  
Travelling Expenses (if any) \$85.00 : : 19

Committee's Minute. NEW YORK NOV 17 1954  
Assigned. See attached 1st Entry Report



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