

# Report on Steam Turbine Machinery.

No. 129751

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4a.

19... When handed in at Local Office... 19... Port of...  
 Date, First Survey... Last Survey...  
 Survey held at Birkenhead (Number of Visits...)  
 on the S/S Trochiscus ex "Fort Matanzas" T 2 TYPE. Tons (Gross... Net...)  
 at Portland Ore. By whom built Kaiser Co. Inc. Yard No. 79 When built 8/1944  
 engines made at Hyman, Mass By whom made G.E.C. Engine No. When made 8/1944  
 boilers made at St Louis, MO By whom made Combustion Engine Co Boiler No. When made 8/1944  
 Shaft Horse Power at Full Power 6000/6600 Owners Anglo Saxon Petre Co Port belonging to London  
 Nom. Horse Power as per Rule 1425 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines Steam turbine connected to electric motor & screw shaft

of Turbines One Direct coupled, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing...  
 Alternating Current Generator... phase 60/62 periods per second rated 5400 Kilowatts 2370 Volts at 3715 revolutions per minute;  
 Direct Current Generator...  
 supplying power for driving One Propelling Motor, Type A.C. Synchronous  
 rated 6000/6600 H.P. 2300/2370 Volts at 90/93 revolutions per minute. Direct coupled, single or double reduction geared to one propelling shafts.

TURBINE	H. P.	I. P.	L. P.	ASTERN.
No. of rows				
No. of stages				
No. of rows in each stage				

*see approved drawings for T2 design*

Shaft Horse Power at each turbine H.P. 6000/6600 Revolutions per minute, at full power, of each Turbine Shaft I.P. 3715/3600 1st reduction wheel...  
L.P. 90/93 main shaft

Motor Shaft diameter at journals H.P. 10" Pitch Circle Diameter 10" 1st pinion... 1st reduction wheel...  
I.P. 5" 2nd pinion... main wheel...  
L.P. Width of Face { 1st reduction wheel... main wheel... }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion... 1st reduction wheel...  
 2nd pinion... main wheel... }

Pinion Shafts, diameter at bearings { 1st... External... 2nd... Internal... diameter at bottom of pinion teeth 1st... 2nd... }

Generator Shaft, diameter at bearings 5.5"  
 Propelling Motor Shaft, diameter at bearings 17 1/4"

Thrust Shaft, diameter at collars 17 1/2" (at collar)  
 tube shaft fitted with a continuous liner Yes

Screw Shaft, diameter 18.185" as per rule... 18.625" as fitted... Is the screw... Yes

Thickness between bushes 0.858 as per rule... 1.125 as fitted... Is the after end of the liner made watertight in the... Yes

Propeller, diameter 19' 6" Pitch 17' 6" No. of Bades 4 State whether Moveable No Total Developed Surface 138' 3" square feet.

Condenser... No. of Turbines fitted with astern wheels... Feed Pumps { No. and size Two 1 1/2 m 6 How driven GE Turbine 115 HP. }

Bilge Pumps connected to the Main Bilge Line { No. and size 2 bilge 125 gpm, 1 bilge 95 gpm, 450 gpm, Butterworth How driven Electric motor, elect motor, elect motor }

Lubricating Oil Pumps, including Spare Pump, No. and size 2- 1150 gpm  
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected both to Main Bilge Pumps and Auxiliary

Bilge Pumps, No. and size:—In Engine and Boiler Room 3 motor Room 4 @ 3", 3 @ 3", 2 @ 3" In Pump Room etc  
 Particulars see drawing in Head Office records.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 18" Independent Power Pump Direct Suctions to the Engine Room  
 Bilges, No. and size 2 @ 4" dia Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes

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 Yes  
 Are all Sea Connections fitted direct on the skin of the ship steel distance pieces E.W. to skin Are they fitted with Valves or Cocks Values

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line below Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes What pipes pass through the bunkers none How are they protected Yes

What pipes pass through the deep tanks Yes Have they been tested as per rule Yes  
 Are all Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 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 Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from below

Boilers, &c.—(Letter for record... Total Heating Surface of Boilers 11354 sq ft  
 Is Forced Draft fitted Yes No. and Description of Boilers Two Water Tubes Working Pressure 500 lbs  
 Is a Report on Main Boilers now forwarded? See previous report.

Is <sup>a Donkey</sup> Boiler fitted? no If so, is a report now forwarded? \_\_\_\_\_  
 { <sup>an Auxiliary</sup> \_\_\_\_\_

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? Yes.  
 State the principal additional spare gear supplied Spare Cast Iron Propeller Wheel 3728.

The foregoing is a correct description, \_\_\_\_\_ Manufacture \_\_\_\_\_

Dates of Survey while building { During progress of work in shops - - } \_\_\_\_\_  
 { During erection on board vessel - - } \_\_\_\_\_  
 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 \_\_\_\_\_ 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 \_\_\_\_\_ Identification Mark \_\_\_\_\_

\_\_\_\_\_ ; Chemical analysis \_\_\_\_\_  
 If Pinion Shafts are made of special steel state date of approval of chemical analysis, physical properties and heat treatment \_\_\_\_\_

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? Yes  
 Is the flash point of the oil to be used over 150°F? Yes Have the requirements of the Rules for the use of oil as fuel been complied with? Yes

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 T.Z. Tankers.

General Remarks. (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed under the survey of the U.S. Coastguard and the American Bureau of Shipping. The scantlings and general arrangements have been checked and found in accordance with the plans on board. Machinery opened up and surveyed & subsequently seen under working conditions & found satisfactory. Eligible in my opinion to have record of LMC 9/49.

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

James B. Murray  
 Engineer Surveyor to Lloyd's Register of Shipping.



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Committee's Minute \_\_\_\_\_  
 Assigned \_\_\_\_\_

Certificate (if required) to be sent to \_\_\_\_\_

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

pt. 4d.  
 Date of writing \_\_\_\_\_  
 No. in Su \_\_\_\_\_  
 Reg. Book \_\_\_\_\_  
 29036  
 Built at \_\_\_\_\_  
 Electrical \_\_\_\_\_  
 Shaft Hor \_\_\_\_\_  
 Machinery \_\_\_\_\_  
 Trade for \_\_\_\_\_  
 LANS.—  
 TEAM EN \_\_\_\_\_  
 variation as \_\_\_\_\_  
 valve Yes  
 shut-off val \_\_\_\_\_  
 Is the emer \_\_\_\_\_  
 to cause apr \_\_\_\_\_  
 OIL ENGI \_\_\_\_\_  
 per Rule wi \_\_\_\_\_  
 GENERAT \_\_\_\_\_  
 Kw. per G \_\_\_\_\_  
 supplied \_\_\_\_\_  
 within \_\_\_\_\_  
 Are wear-d \_\_\_\_\_  
 MOTORS.—  
 Amps. per \_\_\_\_\_  
 machining \_\_\_\_\_  
 overspeedi \_\_\_\_\_  
 EXCITAT \_\_\_\_\_  
 power Yes  
 hutions for \_\_\_\_\_  
 and \_\_\_\_\_  
 Have cert \_\_\_\_\_  
 CONTROL \_\_\_\_\_  
 Does it co \_\_\_\_\_  
 used) \_\_\_\_\_  
 locking of \_\_\_\_\_  
 (state \_\_\_\_\_  
 earthing o \_\_\_\_\_  
 shock and \_\_\_\_\_  
 provided \_\_\_\_\_  
 n \_\_\_\_\_  
 At what t \_\_\_\_\_  
 Are fuses \_\_\_\_\_  
 Earth De \_\_\_\_\_  
 by an ear \_\_\_\_\_  
 necessary \_\_\_\_\_  
 excitation \_\_\_\_\_  
 Bridge o \_\_\_\_\_  
 currents o \_\_\_\_\_  
 in the eng \_\_\_\_\_  
 independe \_\_\_\_\_  
 11/1/49 \_\_\_\_\_  
 and for e \_\_\_\_\_  
 Discharg \_\_\_\_\_  
 provided \_\_\_\_\_  
 Are the P \_\_\_\_\_  
 10.46