

REPORT ON STEAM TURBINE MACHINERY. No. 72358

42.

of writing Report **DEC. 18. 1947** When handed in at Local Office **22. 12. 47** Port of **Glasgow.**
 in Survey held at **Glasgow.** Date, First Survey **22nd. October** Last Survey **11th Dec. 1947**
 Book. (Number of Visits **14**)
 46 on the **S.S. "MESA VERDE"** Tons { Gross **10448** Net **6301.**
 at **Portland, Oregon U.S.A.** By whom built **Kaiser Co. Inc.** Yard No. **99** When built **1944**
 ines made at **LYNN, Mass. U.S.A.** By whom made **General Electric Co.** Engine No. **68246** When made **1944**
 ers made at **New York N.Y.** By whom made **Combustion Eng'g Co. Inc.** Boiler No. **5.9667** When made **1944**
 ft Horse Power at Full Power **6000** Owners **British Tanker Co. Ltd.** Port belonging to **LONDON.**
 . Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes **NO** Is Electric Light fitted **YES**
 de for which Vessel is intended **Carrying Oil in Bulk.**

AM TURBINE ENGINES, &c.—Description of Engines **Turbine driving generator for main Propulsion Motor.**

of Turbines **Ahead.** **1** **Direct coupled,** **single reduction geared** **to** **✓** **propelling shafts.** No. of primary pinions to each set of reduction gearing **✓**
 coupled to { **Alternating Current Generator** **3** phase **60/62** periods per second { rated **4925** Kilowatts **2300** Volts at **3600** revolutions per minute;
 applying power for driving **1** Propelling Motor, Type **T. S. M. 80.** **General Electric Co.**
4625 **K.V.A.** **2300** Volts at **90** revolutions per minute. Direct coupled, **single or double reduction geared to** **ONE** propelling shaft.

	H.P.			I.P.			I.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			2									
"			1									
"	NO		1									
"	PARTICULARS AVAILABLE		1									
"			1									
"			1									
"			1									
"			1									
"			1									
"			1									
"			1									

H.P. **6000** **Revolutions per minute, at full power, of each Turbine Shaft** { H.P. **3600/3715** **1st reduction wheel**
 { L.P. **90** **main shaft**

Shaft diameter at journals { H.P. **Pitch Circle Diameter** { 1st pinion **1st reduction wheel** **Width of Face** { 1st reduction wheel
 { L.P. **2nd pinion** **main wheel** { main wheel

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

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

Shafts, diameter at bearings { 1st **diameter at wheel shroud,** { 1st **Generator Shaft, diameter at bearings**
 { main **main** { main **Propelling Motor Shaft, diameter at bearings**

mediate Shafts, diameter as per rule **Thrust Shaft, diameter at collars** as per rule **Tube Shaft, diameter** as per rule
 as fitted **as fitted**

Shaft, diameter as per rule **18 3/8"** Is the { tube { screw } shaft fitted with a continuous liner { **yes** **Bronze Liners, thickness in way of bushes** as per rule **1 1/4"**
 as fitted **27/32"** Is the after end of the liner made watertight in the propeller boss **yes.** If the liner is in more than one length are the junctions

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

appliance fitted at the after end of the tube shaft **No** Length of Bearing in Stern Bush next to and supporting propeller **7' 3"**
 Propeller, diameter **19' 6"** Pitch **17' 6"** No. of Blades **4** State whether Moveable **No** Total Developed Surface **138.3** 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
1- AUXILIARY WORTHINGTON SIMPLEX 10" x 7" x 24"
STEAM.

No. of Turbines fitted with astern wheels **Feed Pumps (now seen).** No. and size **How driven**

connected to the Main Bilge Line { No. and size **How driven**

ast Pumps, No. and size **Lubricating Oil Pumps, including Spare Pump, No. and size**
 independent means arranged for circulating water through the **Oil Cooler** **✓** **Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge**

No. and size:—In Engine and Boiler Room **✓**

Water Circulating Pump Direct Bilge Suctions, No. and size **Independent Power Pump Direct Suctions to the Engine Room**
 No. and size **✓** Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **✓**

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 **✓**
Sea Connections fitted direct on the skin of the ship **✓** Are they fitted with Valves or Cocks **✓**

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 **✓**
 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 **✓**

pipes pass through the bunkers **✓** How are they protected **✓**
 pipes pass through the deep tanks **✓** Have they been tested as per rule **✓**

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **✓**
 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
 ment to another **✓** Is the Shaft Tunnel watertight **✓** Is it fitted with a watertight door **✓** worked from **✓**

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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 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:—

The foregoing is a correct description,

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 4/11/47 Rotors 4/11/47 Blading 4/11/47 Gearing

Wheel shaft Thrust shaft Intermediate shafts Tube shaft Screw shaft 23/10/47

Propeller 23/10/47 Stern tube 23/10/47 Engine and boiler seatings Engine holding down bolts 23/10/47

Completion of pumping arrangements Boilers fixed Engines tried under steam DEC 11 1947

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

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 YES If so, state name of vessel U.S.M.C. T.2. TYPE TANKER

General Remarks (State quality of workmanship, opinions as to class, &c. The aforementioned machinery parts were examined at the request of the Owners with a view towards classification with the Society. The materials and workmanship, in so far seen, are good. It was stated by the Owner's representative that it was the Owner's intention to open the remaining machinery parts for examination as soon as possible, as opportunity offered.

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

John Manson & McLean
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute

Assigned

GLASGOW

23 DEC 1947



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