

REPORT ON ELECTRIC PROPELLING MACHINERY.

No. 5006

3 AUG 1948

Writing Report 19TH JUNE 1948 When handed in at Local Office 20TH JUNE 1948 Port of GALVESTON, TEXAS.
Survey held at GALVESTON, TEXAS Date, First Survey 26TH MAY 48 19 Last Survey 12TH JUNE 1948
No. of Visits CONTINUOUS
Single on Twin Triple Quadruple Screw vessel S.S. "MESA VERDE"
Tons Gross 10640 Net 6313
PORTLAND, OREGON. By whom built KAISER CO. INC. Yard No. 99 When built 1944-11
Local Machines made at LYNN, MASS. By whom made GENERAL ELECTRIC CO. Generator Nos. 5727846 When made 1944
Motor Nos. 5690834
Horse Power at Full Power 6000 Total Capacity of Generators 4925/5400 kilowatts
Ternary Numeral as per Rule 1425 Owners BRITISH TANKER CO Port belonging to LONDON.
For which Vessel is intended PETROLEUM IN BULK

Have plans of the Machines, Control Gear, Cables and Circuits been submitted and approved. ABS APPROVED. A.I.E.E. STANDARDS.

ENGINES.—Type of Engine CURTIS IMPULSE TURBINE No. of Engines ONE R.P.M. 3600/2715 Is a Governor fitted YES Is the speed as per Rule when load is thrown off YES Is an Emergency Governor fitted YES Is it arranged for hand tripping YES Does it trip the throttle YES If exhaust steam is admitted, is an automatic shut-off fitted NO Is provision made for bled steam YES and is a non return or positive valve fitted YES Lubricating Oil.—State means provided for emergency supply STORAGE TANKS AND ELE DRIVEN 600P.M. ROTEX PUMP emergency reserve sufficient to maintain lubrication as per Rule YES Mechanical Balance.—Are the Engines and Generators balanced so as not appreciable vibration YES

4/4GINES.—Type of Engines Type of Engines R.P.M. Is a Governor fitted Is the speed variation as per Rule when load is thrown off Is an Emergency Governor fitted Does it operate as per Rule

GENERATORS.—Direct or Alternating Current AC No. of Generators ONE If A.C. state frequency at full load 60/62
Per Generator 4925/5400 Volts per Generator 2300/2370 Amps. per Generator 1237/1315 Have certificates of works tests been supplied ABS and the results found as per Rule A.I.E.E. STANDARDS Ventilation.—State how arranged (open or closed system) CLOSED SYSTEM

SURFACE AIR COOLER Are ventilating arrangements satisfactory YES Heating when Idle.—What provision is made ONE HEATER AT EACH OF GENERATOR Facilities for Inspection and Repair.—Are these as per Rule YES
Pressure gauges supplied NO Bilges.—Are the arrangements to prevent accumulation of bilge-water under the machines satisfactory YES

S.H.P. per Motor at full power 6000 No. of Motors ONE Single or double unit SINGLE Volts per Motor 2300
Per Motor 1160 Have certificates of works tests been supplied ABS and the results found as per Rule A.I.E.E. A.C. Motors.—Is provision made for the slip rings YES Do the Motors remain in synchronism under all normal conditions of running YES D.C. Motors.—If the system permits running at light loads are overspeed protection devices fitted YES

EXCITATION.—Is power for excitation taken from the ship's Auxiliary Generators YES If so, state voltage 110 and excitation amperes at full 555 kilowatts for excitation 150 State excitation arrangements for Propulsion Generators NORMALLY CONTROLLED BY A VOLTAGE REGULATOR ALSO MANUALLY OPERATED RHODSTAT IN EVENT OF THE REGULATOR BECOMING INOPERATIVE NO OVERLOAD OR SHORT CIRCUIT PROTECTION PROVIDED
Propelling Motors FROM SAME SOURCE AS GENERATORS Is an alternative means of excitation provided TWO 75 KWS UNITS
Certificates of works tests been supplied ABS and found as per Rule A.I.E.E.

CONTROL.—Position of Main Control Panel IN ENGINE ROOM THWARTSHIP ON GENERATOR FLAT LEVEL
comply with the requirements regarding position YES, grouping of controls YES, instruments YES, insulating materials (state type) BONY ASBESTOS AND A.I.E.E. APPROVED MATERIALS spacing and shielding of live parts A.I.E.E., accessibility YES, position of fuses YES, of screws and nuts YES, labelling YES, fuses for voltmeters, pilot lamps, etc. YES, provision for manual operation of contractors, etc. (method employed) NO PROVISION FOR MANUAL OPERATION ON MAGNETICALLY OPERATED CONTACTORS

Protection of instrument cases above 250 volts to earth YES, provision of renewable tips on switches subject to arcing YES, capability of withstanding and inclination YES, operation with high and low voltage YES, rust proofing of parts YES Overload and Short Circuit Protection.—State means used NONE

At load is it set to operate YES Has it been tripped by hand when running at full power and found satisfactory YES
Type of an approved type A.I.E.E. STANDARD. RENEWABLE TYPE TO BE REPLACED (SEE RPT 13).

Detection.—Is the main circuit provided with means for detecting earths YES Are aural and visual alarms fitted VISUAL Is main power interrupted earth fault EXCITATION if a limiting resistance is in the earth detecting circuit what is the ohmic value 67 OHMS What earth leakage current is necessary to operate the device 5 AMPS If a switch is used to disconnect the aural signal does it automatically give visual indication YES Are the circuits provided with means for earth detection NO Mechanical Protection.—Are circuits above 250 volts to earth protected as per Rule YES

or Deck Control.—Is bridge control provided NO If so, from how many stations YES can it be operated freely without producing loads in excess of the working capacity of the plant YES and without reference to electrical instruments YES Is an emergency control provided engine room YES and can the transfer to this control be made quickly in the engine room YES Can the emergency control be rendered mechanically independent of the deck control YES

Instruments and Gauges.—State Instruments provided for each Generator FIELD TEMP; STATOR TEMP; EXCITATION TEMP; AC VOLT METER; FIELD AMP METER; AC AMP METER; TURBINE RPM INDICATOR; PHASE BALANCE RELAY AND GROUND PROTECTION RELAY
each Motor STATOR TEMP; EXCITATION VOLT METER; HP METER; FIELD AMP METER; AC AMP METER; SHAFT RPM INDICATOR Is an Insulation Tester provided YES

Reverse Protection.—Are all shunt field circuits protected as per Rule YES D.C. Systems.—If the Generators are connected in series state means used to prevent reversal of direction of rotation of the Prime Movers YES

Propulsion Generators also used alternatively for other purposes YES If so, is provision made for overload protection, voltage adjustment, etc. YES

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Reversing Switches.—If any are provided are they interlocked as per Rule.....YES.....stances.—Are resistances for synchronous motor fields insulated as per Rule.....YES..... Temperature Alarm.—Are machines with enclosed ventilating system, etc., fitted with temperature alarm.....No.....

CONDUCTORS & CABLES.—Are all essential Conductors stranded as per Rule.....YES..... Are the ends of Paper and Varnished Cambric Insulated sealed.....YES..... Are all Cables carrying A.C. constructed and installed as per Rule.....YES..... Have all Cables been tested at the makers' works.....YES.....

SECONDARY BATTERIES.—Are Batteries used for starting Main Propulsion Engines.....✓..... If so, have full particulars of rating been submitted and approved.....✓..... Have they been tested under working conditions and do they give the required number of starts.....✓..... Are they as per Rule.....✓..... Are the charging arrangements satisfactory.....✓.....

SPARE GEAR.—If engaged on open sea service has a list of spare gear been submitted and approved.....YES..... Is a list of the articles supplied attached to this report.....No..... Are they stored as per Rule.....YES.....

ELECTRIC PROPULSION EQUIPMENT CONDUCTORS.

DESCRIPTION	CONDUCTORS.		TOTAL MAXIMUM CURRENT—AMPERES.*		MAXIMUM VOLTAGE TO EARTH.	INSULATED WITH.	DI-ELECTRIC THICKNESS.	HOW PROTECTED	
	No. per Pole.	Nominal Area per Pole.	In Circuit.						A.I.E.E. Rule.
			When Running.	When Manœuvring.					
MAIN GENERATORS	2	2.3562	1315	✓	2120	2300	V.C.	10/64"	BRONZE TAPE
GENERATOR FIELDS	1	.3922	165	✓	529	110	V.C.	6/64"	L.C. + BASKET WEAVE
MAIN MOTORS	2	2.3562	1160	✓	2120	2300	V.C.	10/64"	BRONZE TAPE
MOTOR FIELDS	1	.3922	390	✓	529	110	V.C.	6/64"	L.C. + BASKET WEAVE
CONTROL CIRCUITS	1	.0051	-		30	-	V.C.	4/64"	" " "
OTHER CIRCUITS:—									

*For field circuits the "Hot" and "Cold" value should be given.

The foregoing is a correct description,

.....✓..... Electrical Engineers. Date.....✓.....

COMPASSES.—Are Single-Conductor circuits carrying direct current arranged with lead and return Conductors fitted as close to one another as possible.....YES.....

Have tests been made during adjustment of the Compasses to determine the effect of switching the main circuits on and off.....YES.....

.....✓..... Builders' Signature. Date.....✓.....

Is this machinery duplicate of a previous case.....YES..... If so, state name of vessel..... T2 TYPE TANKERS

General Remarks (State quality of workmanship, opinions as to class, &c.)..... The electrical installation to the requirements of the American Bureau of Shipping has been in operation since November 1943. The installation is in accordance with A.I.E.E. Standards + generally in accordance with Rules, except as noted in this report + as listed below:

(1) No overload or short circuit protection is provided on main propulsion unit.

(2) Main propulsion cables have no lead alloy sheath as required by the Rules.

The dimensions in this report have been taken from the approved plans for this type of vessel. The materials and workmanship have been checked, as far as possible on the ship, + found correct. The materials and workmanship are good and the installation has been examined under working conditions + found satisfactory.

In my opinion the electrical installation is such as could be accepted by the Committee for Classification.

The amount of Entry Fee ... £ ✓ : : When applied for, 19.....

Travelling Expenses (if any) £ ✓ : : When received, 19.....

Date.....

Committee's Minute.....

NEW YORK JUL 14 1948

See 1st Entry Rpt. attached

