

T. 2. TANKER. - G.E.C. TYPE.

pt. 4d.

No. 105632

# REPORT ON ELECTRIC PROPELLING MACHINERY.

Received at London Office

Date of writing Report 19 When handed in at Local Office 30 SEP 1948 Port of NEWCASTLE - UPON - TYNE  
No. in Survey held at WALLSEND - ON - TYNE Date, First Survey 26/8/48 19 Last Survey 20/9/48 19  
Reg. Book. 52702 Single on Twin Triple Quadruple Screw vessel "BEECHER ISLAND."  
Built at MOBILE ALABAMA By whom built ALABAMA D.D. & S.B. CO Yard No. - When built 1944  
Electrical Machines made at LYNN, MASS By whom made GENERAL ELECTRIC CO. Generator Nos. - When made 1944  
Motor Nos. 5690822  
Shaft Horse Power at Full Power 6000HP @ 90 R.P.M. - 6000HP @ 93 R.P.M. Total Capacity of Generators 5400 kilowatts  
Machinery Numeral as per Rule 1485 Owners BRITISH TANKER CO. LTD. Port belonging to LONDON  
Trade for which Vessel is intended CARRYING PETROLEUM IN BULK.

LANE. Have plans of the Machines, Control Gear, Cables and Circuits been submitted and approved No.

TEAM ENGINES. Type of Engine STEAM TURBINE. No. of Engines ONE R.P.M. 3600/2715 Is a Governor fitted YES Is the speed variation 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 valve YES If exhaust steam is admitted, is an automatic shut-off fitted - Is provision made for bled steam - and is a non-return or positive shut-off valve fitted YES Lubricating Oil. State means provided for emergency supply STEAM STANDBY LUB. OIL PUMP AND GRAVITY TANK  
Is the emergency reserve sufficient to maintain lubrication as per Rule YES Mechanical Balance. Are the Engines and Generators balanced so as not to cause appreciable vibration YES

IL 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 -

ENERATORS. Direct or Alternating Current A.C. No. of Generators ONE If A.C. state frequency at full load 60/62  
Kw. per Generator 5400 Volts per Generator 2300/2370 Amps. per Generator 1237/1315 Have certificates of works tests been supplied No and the results found as per Rule - Ventilation. State how arranged (open or closed system) CLOSED  
Are ventilating arrangements satisfactory YES Heating when Idle. What provision is made RESISTANCE HEATERS  
Facilities for Inspection and Repair. Are these as per Rule YES

Are wear-down gauges supplied No Bilges. Are the arrangements to prevent accumulation of bilge-water under the machines satisfactory YES

MOTORS. S.H.P. per Motor at full power 6000 No. of Motors ONE Single or double unit SINGLE Volts per Motor 2300  
Amps. per Motor 1150 Have certificates of works tests been supplied No and the results found as per Rule - A.C. Motors. Is provision made for machining the slip rings YES Do the Motors remain in synchronism under all normal conditions of running YES D.C. Motors. If the system permits overspeeding at light loads are overspeed protection devices fitted -

XCITATION. Is power for excitation taken from the ship's Auxiliary Generators YES If so, state voltage 120 and excitation amperes at full power 682 kilowatts for excitation YES State excitation arrangements for Propulsion Generators EXCITER WITH AMPLIDYNE CONTROL, DRIVEN BY

AUX. ALTERNATOR TURBINE, ALTERNATIVELY MANUAL CONTROL OF EXCITATION  
and Propelling Motors SAME AS ALTERNATOR Is an alternative means of excitation provided YES  
Have certificates of works tests been supplied No and found as per Rule -

ONTROL. Position of Main Control Panel FORWARD END OF CONTROL PLATFORM.  
Does it comply with the requirements regarding position YES, grouping of controls YES, instruments YES, insulating materials (state type used) FLAT FRONTED BOARD, spacing and shielding of live parts YES, accessibility YES, position of fuses YES, locking of screws and nuts YES, labelling YES, fuses for voltmeters, pilot lamps, etc. YES, provision for manual operation of contractors, etc. (state method employed) MECHANICALLY OPERATED BY LEVER AND CAMS

Earthing of instrument cases above 250 volts to earth YES, provision of renewable tips on switches subject to arcing YES, capability of withstanding shock and inclination YES, operation with high and low voltage YES, rust proofing of parts YES. Overload and Short Circuit Protection. State means provided OVERLOAD CURRENT COILS WHICH TRIP EXCITATION.

At what load is it set to operate 50% O.L. Has it been tripped by hand when running at full power and found satisfactory YES  
Are fuses of an approved type AMERICAN PATTERN.

Earth Detection. Is the main circuit provided with means for detecting earths YES Are aural and visual alarms fitted YES Is main power interrupted by an earth fault YES If a limiting resistance is in the earth detecting circuit what is the ohmic value CURRENT TRANSFORMER What earth leakage current is necessary to operate the device YES If a switch is used to disconnect the aural signal does it automatically give visual indication YES Are the excitation circuits provided with means for earth detection YES Mechanical Protection. Are circuits above 250 volts to earth protected as per Rule YES

Bridge or Deck Control. Is bridge control provided No If so, from how many stations - can it be operated freely without producing currents or loads in excess of the working capacity of the plant - and without reference to electrical instruments - Is an emergency control provided in the engine room - and can the transfer to this control be made quickly in the engine room - Can the emergency control be rendered mechanically independent of the deck control - Instruments and Gauges. State Instruments provided for each Generator WATTHOUR METER - ONE A.C. AMMETER - ONE A.C. VOLTMETER - ONE D.C. FIELD AMMETER - ONE R.P.M. TURBINE SPEED METER - ONE D.C. VOLTMETER MOTOR AND GENERATOR FIELDS.

and for each Motor ONE A.C. AMMETER - ONE H.P. METER - ONE D.C. FIELD AMMETER - ONE SHAFT REV. INDICATOR. Is an Insulation Tester provided YES

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

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

1 - No TOOLS SUPPLIED. 7 TAPPINGS ON TRANSFORMER VALVES 0.5, 0.6, 0.8, 1.0, 1.5, 2.0 and 2.5 AMPS.

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Reversing Switches.—If any are provided are they interlocked as per Rule. Yes Resistances.—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 VISUAL SIGNAL PYROMETERS

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

SECONDARY BATTERIES.—Are Batteries used for starting Main Propulsion Engines. No 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 installed 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. No Is a list of the articles supplied attached to this report. No Are they stored as per Rule. Yes

SPARE GEAR APPROVED BY AMERICAN BUREAU OF SHIPPING.

### ELECTRIC PROPULSION EQUIPMENT CONDUCTORS.

DESCRIPTION	CONDUCTORS.		TOTAL MAXIMUM CURRENT—AMPERES.*		AIEE Rule. RATING.	MAXIMUM VOLTAGE TO EARTH.	INSULATED WITH.	DI-ELECTRIC THICKNESS.	HOW PROTECTED.
	No. per Pole.	Nominal Area per Pole.	In Circuit. When Running.	When Manoeuvring.					
MAIN GENERATORS	2	2 x 1.1781	1200 ✓	—	2 x 890	2300	V.C.	0.156.	ARMoured & BRAIDED
GENERATOR FIELDS	1	0.392	—	—	444	660	V.C.	0.094	" "
MAIN MOTORS	2	2 x 1.1781	1200 ✓	—	2 x 890	2300	V.C.	0.156	" "
MOTOR FIELDS	1	0.392	—	—	444.	660	V.C.	0.094	" "
CONTROL CIRCUITS									
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

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

Builders' Signature.

Date.

Is this machinery duplicate of a previous case. Yes If so, state name of vessel. SS. "THELICONUS"

General Remarks (State quality of workmanship, opinions as to class, &c.) THE ELECTRICAL INSTALLATION TO THE STANDARDS OF THE AMERICAN BUREAU OF SHIPPING HAS BEEN OPERATION FOR APPROXIMATELY FOUR YEARS. THE PROPULSION ALTERNATOR AND MOTOR WERE OPENED UP FOR INSPECTION AND FOUND AFTER CLEANING TO BE IN GOOD ORDER. THE ALTERNATOR WAS CLEANED IN WAY OF THE SLIPRINGS AND SHAFT WHERE A DEPOSIT OF CARBON AND OIL HAD COLLECTED. THE MOTOR WINDINGS WERE CLEANED AND REVARNISHED. ON COMPLETION OF CLEANING THE INSULATION RESISTANCE WAS TAKEN AND FOUND TO BE SATISFACTORY.

THE MATERIALS USED AND THE WORKMANSHIP ARE SATISFACTORY.

IN MY OPINION THE ELECTRICAL PROPULSION EQUIPMENT OF THIS SHIP IS IN A SATISFACTORY CONDITIONS AND ELIGIBLE TO RECEIVE THE SOCIETY'S CLASSIFICATION OF L.M.C. Q. 48.

Noted sub 3/12/48

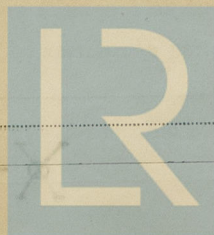
The amount of Entry Fee ... £ : : When applied for, 19

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

Date. **FRI. 10 DEC 1948**

Committee's Minute.

*R. Stone*  
Surveyor to Lloyd's Register of Shipping.



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