

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

Rpt. 13.

No. 105632

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

29 OCT 1948

Date of writing Report 19... When handed in at Local Office 30 SEP 1948 Port of NEWCASTLE-ON-TYNE
No. in Survey held at WALLSEND - ON - TYNE Date, First Survey 26/8/48 Last Survey 20/9/48 19...
Reg. Book. 52402 on the S.S. "BEECHER ISLAND" (No. of Visits 9)
Built at MOBILE ALABAMA By whom built ALABAMA D.D. & S.B. Co. Yard No. - Tons { Gross 10668
Owners BRITISH TANKER CO. LTD Port belonging to LONDON When built 1944
Installation fitted by ALABAMA D.D. & S.B. Co. When fitted 1944
Is vessel equipped for carrying Petroleum in bulk YES Is vessel equipped with D.F. YES E.S.D. YES Gy.C. YES Sub. Sig. -

Plans, have they been submitted and approved No System of Distribution 3 WIRE - A.C. Voltage of Lighting 115
Cooking Heating 115 Power 450 D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60
Prime Movers, has the governing been found as per Rule when full load is thrown on and off YES Are turbine emergency governors fitted
with a trip switch YES Generators, are they compound wound - and level compounded under working conditions -
if not compound wound state distance between generators - and from switchboard - Are the generators arranged to run
in parallel YES, are shunt field regulators provided YES Is the compound winding connected to the negative or positive pole
- Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing No Have certificates of
test for machines under 100 kw. been supplied No and the results found as per Rule -

Position of Generators IN ENGINE ROOM
is the ventilation in way of generators satisfactory YES are they clear of inflammable material and protected from mechanical injury and
damage from water, steam and oil YES Switchboards, where are main switchboards placed NEAR GENERATORS - ON FORWARD END
OF MAIN CONTROL PLATFORM
are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,
steam and oil YES, what insulation is used for the panels DEAD FRONT BOARD, if of synthetic insulating
material is it an Approved Type - if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as
per Rule - Is the construction as per Rule, including locking of screws and nuts YES Description of Main Switchgear
for each generator and arrangement of equaliser switches 3 POLE CIRCUIT BREAKER WITH OVERLOAD RELEASE WITH TIME LAGS ON EACH POLE
AND REVERSE CURRENT RELAY
and the switch and fuse gear (or circuit breakers) for each outgoing circuit 3 POLE CIRCUIT BREAKER WITH 3 OVERLOADS

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 16
Also 3 WATTMETERS AND 2 FREQUENCY METERS
ammeters 7 voltmeters 1 synchronising devices. For compound machines in parallel are the ammeters and reversed current
protection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means provided
EARTH LAMPS

Switches, Circuit Breakers and Fuses, are they as per Rule YES, are the fuses an Approved Type AMERICAN PATTERN
make of fuses - are all fuses labelled YES If circuit breakers are provided for the generators, at what
overload do they operate 150% FL, and at what current do the reversed current protective devices operate 10% FL

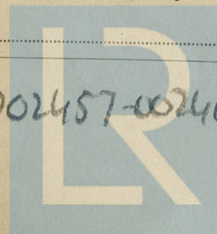
Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule YES

Cables, are they insulated and protected as per Rule YES, if otherwise than as per Rule are they of an Approved Type AMERICAN PATTERN
state maximum fall of pressure between bus bars and any point under maximum load - are the ends of all cables having a sectional
area of 0.01 square inch and above provided with soldering sockets NO - ALL MECHANICAL CONNECTORS Are all paper insulated and varnished cambric insulated
cables sealed at the ends YES Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil,
high temperatures or risk of mechanical damage YES, are any cables laid under machines or floorplates YES, if so, are they
adequately protected YES Are cables in machinery spaces, galleys, laundries, etc., lead covered YES or run in conduit -
or of the "HR" type - State how the cables are supported or protected ALL CABLES - LEAD COVERED AND ARMOURD RUN
IN "U" BRACKETS

Are all lead sheaths, armouring and conduits effectually bonded and earthed YES Are all cables passing through decks and watertight
bulkheads provided with deck tubes or watertight glands YES, where unarmoured cables pass through beams, etc., are the holes
effectively bushed YES Refrigerated chambers, are the cables and fittings as per Rule -

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule YES Emergency Supply, state position
IN SEPERATE HOUSE ON POOP

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Lloyd's Register
Foundation

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (feet - inches).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area of Conductor Sq. ins. at max. temp.				
WIRELESS	1	0.0261	43.5	72	250	V.C. L. & A. 2 CORE.
NAVIGATION	1	0.0082	2	34	250	V.C. L. & A. 2 CORE.
MIDSHIP & FORECASTLE LIGHTING.	1	0.0829	50	113	230	V.C. L. & A. 3 CORE.
POOP & BOAT DECK LIGHTING.	1	0.0261	13	54.5	60	V.C. L. & A. 3 CORE.
UPPER DECK ACCOMM. LIGHTING.	1	0.0521	13	83.0	50	V.C. L. & A. 3 CORE.
ENGINE ROOM LIGHTING.	1	0.0521	25	83.0	20	V.C. L. & A. 3 CORE.
BOILER ROOM LIGHTING.	1	0.0206	15	46.5	60	V.C. L. & A. 3 CORE.
BATTERY CHARGING.	1	0.003	10	13	40	V.C. L. & A. 3 CORE.

Navigation Lamps, are they separately wired... Yes... controlled by separate double pole switches and fuses. Yes... Are the switches and fuses in a position accessible only to the officers on watch... Yes... is an automatic indicator fitted... Yes... Is an alternative supply provided... Yes

Secondary Batteries, are they constructed and fitted as per Rule... Yes... are they adequately ventilated... Yes

state battery capacity in ampere hours... 56

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof... Yes

Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present... Yes

if so, how are they protected... "WIGAN" FLAMEPROOF FITTINGS

and where are the controlling switches fitted... IN ACCOMMODATION MIDSHIP - IN ALLEYWAY... Are all fittings suitably ventilated... Yes

Searchlight Lamps, No. of... ONE... whether fixed or portable... PORTABLE... are they of the carbon arc or of the filament type... Yes

Heating and Cooking, is the general construction as per Rule... Yes... are the frames effectually earthed... Yes... are heaters in the accommodation of the convection type... Yes

Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil... Yes

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment... Yes... Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing... No

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule... No

Control Gear and Resistances, are they constructed and fitted as per Rule... Yes... Lighting Conductors, where required are they fitted as per Rule... Yes

Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with... Yes... are all fuses of an Approved Cartridge Type... AMERICAN PATTERN... Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships... Yes

Are the cables lead covered as per Rule... Yes

E.S.D., if fitted state maker... FATHOMETER... location of transmitter... FORWARD PUMP ROOM... and receiver... FORWARD PUMP ROOM

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations... Yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory... Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	2	G.E. Co.	400	450/360	642	1200	TURBINE.	G.E. Co.
PROPELSION EXCITERS	1	LORIMER DIESEL ENG. CO.	75	450/360	120.5	720	DIESEL	ELECT. MACH. MAN. CO.
SHIPS AUX. EXCITERS	2	G.E. Co.	75	110	682	1200	TURBINE	G.E. Co.
ROTARY TRANSFORMER	2	G.E. Co.	55	120	458	1200	TURBINE	G.E. Co.

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (feet - inches).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area of Conductor Sq. ins. at max. temp.				
MAIN GENERATOR	400	1	0.7854	642	705	30	V.C. L. & A.
" " EQUALISER							
EMERGENCY ALTERNATOR.	75	1	0.0829	120.5	158	30	V.C. L. & A.
PROPELSION GEAR EXCITERS.	75	1	0.4854	682	705	35	V.C. L. & A.
SHIPS AUX. EXCITERS.	55	1	0.5390	458	582	40	V.C. L. & A.
EMERGENCY GENERATOR							
ROTARY TRANSFORMER: MOTOR							
" " GENERATOR...							

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No.	Sectional Area of Conductor Sq. ins. at max. temp.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (feet - inches).	INSULATION.	PROTECTIVE COVERING.
WORKSHOP POWER SECT. BOARD	1	0.0082	9	25.5	100	V.C. L. & A. 3 CORE.
GALLEY POWER PANEL.	3-15KVA TRANSFORMERS.	0.0521	24	83	150	V.C. L. & A. 3 CORE.
MIDSHIP 450VOLT. PANEL.		0.0051	4.5	13.5	220	V.C. L. & A. 3 CORE.
LIGHTING TRANSFORMERS	3-15KVA TRANSFORMERS.	0.0521	24	83	20	V.C. L. & A. 3 CORE.
DOMESTIC REFRIG. PANEL.		0.0051	11	18.5	150	V.C. L. & A. 3 CORE.
EMERGENCY SWITCHBOARD TIE.		0.0829	100	112	70	V.C. L. & A. 3 CORE.
SHORE CONNECTION BOX.		0.51	-	466	150	V.C. L. & A. 3 CORE.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (feet - inches).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area of Conductor Sq. ins. at max. temp.				
MAIN CIRCULATING PUMP MOTOR.	1	125	1	0.2356	156	234	90	V.C. L. & A. 3 CORE.
FIRE & BUTTERWORTH PUMP MOTORS.	2	50	1	0.0521	63	83	130	V.C. L. & A. 3 CORE.
STEERING GEAR MOTORS.	2	30	1	0.0261	38	54.5	150	V.C. L. & A. 3 CORE.
LATHE MOTOR.	1	2	1	0.0051	3.1	18.5	10	V.C. L. & A. 3 CORE.
DRILLING MACHINE MOTOR.	1	1	1	0.0051	1.7	18.5	20	V.C. L. & A. 3 CORE.
GRINDER MOTOR.	1	3	1	0.0051	4.4	18.5	20	V.C. L. & A. 3 CORE.
MAIN CONDENSATE PUMP MOTORS.	2	25	1	0.0206	32	46.5	60	V.C. L. & A. 3 CORE.
AUX. CIRC. PUMP MOTOR.	1	30	1	0.0261	38	54.5	80	V.C. L. & A. 3 CORE.
AUX. CONDENSATE PUMP MOTOR.	1	15	1	0.013	19	24.5	40	V.C. L. & A. 3 CORE.
COOLER CIRC. FAN MOTOR.	1	10	1	0.0082	13	25.5	65	V.C. L. & A. 3 CORE.
FUEL OIL SERVICE PUMP MOTORS.	2	4 1/2	1	0.0051	10	18.5	50	V.C. L. & A. 3 CORE.
LUB. OIL SERVICE PUMP MOTORS.	2	5	1	0.0051	6.9	18.5	60	V.C. L. & A. 3 CORE.
FORCED DRAUGHT FAN MOTORS.	3	50	1	0.0521	63	83	170	V.C. L. & A. 3 CORE.
EVAPORATOR FEED PUMP MOTOR.	1	1	1	0.0051	1.4	18.5	90	V.C. L. & A. 3 CORE.
AFT. ACCOM. VENT. FANS.	2	1 1/2	1	0.0051	2.4	18.5	150	V.C. L. & A. 3 CORE.
FRESH WATER PUMP MOTORS.	2	2	1	0.0051	3.1	18.5	110	V.C. L. & A. 3 CORE.
LUB. OIL SEPARATOR MOTOR.	1	2	1	0.0051	3.1	18.5	90	V.C. L. & A. 3 CORE.
ENGINE ROOM VENT. FAN MOTORS.	4	2	1	0.0051	3.1	18.5	150	V.C. L. & A. 3 CORE.
DOMESTIC REFRIG. MOTOR.	1	7 1/2	1	0.0051	10	18.5	150	V.C. L. & A. 3 CORE.
REFRIG. CONDENSATE PUMP MOTOR.	1	0.5	1	0.0051	0.9	18.5	150	V.C. L. & A. 3 CORE.
ATMOSPHERIC DRAIN & RECEIVER PUMP MOTOR.	1	2	1	0.0051	3.1	18.5	90	V.C. L. & A. 3 CORE.
SHIP SERVICE AIR COMPRESSOR MOTOR.	1	5	1	0.0051	6.9	18.5	15	V.C. L. & A. 3 CORE.
SALT WATER PUMP.	1	7 1/2	1	0.0051	10	18.5	135	V.C. L. & A. 3 CORE.
SANITARY PUMP MOTOR.	1	7 1/2	1	0.0051	10	18.5	130	V.C. L. & A. 3 CORE.
ENGINE ROOM BILGE PUMP MOTOR.	2	10	1	0.0082	13	25.5	130	V.C. L. & A. 3 CORE.
DRINKING WATER PUMP MOTOR AFT.	1	1	1	0.0051	1.7	18.5	120	V.C. L. & A. 3 CORE.
DRINKING WATER PUMP MOTOR MIDSHIP.	1	1	1	0.0051	1.7	18.5	50	V.C. L. & A. 3 CORE.
MAIN MOTOR COOKING FAN MOTOR.	1	15	1	0.013	19	24.5	65	V.C. L. & A. 3 CORE.
TURBINE TURNING GEAR MOTOR.	1	3	1	0.0051	4.4	18.5	20	V.C. L. & A. 3 CORE.
MAIN SHAFT TURNING GEAR.	1	5	1	0.0051	6.9	18.5	110	V.C. L. & A. 3 CORE.
COMBUSTION CONTROL COMPRESSOR MOTOR.	1	15	1	0.013	19	24.5	15	V.C. L. & A. 3 CORE.
CARGO PUMP MOTORS.	2	200	1	0.2556	249	308	30	V.C. L. & A. 3 CORE.
CARGO STRIPPING PUMP MOTORS.	2	50	1	0.0521	63	83	30	V.C. L. & A. 3 CORE.
PUMP ROOM EXHAUST FAN MOTOR.	1	1.5	1	0.0051	2.2	18.5	36	V.C. L. & A. 3 CORE.
WIRELESS M/G.	1	4 1/2	1	0.0051	10	18.5	16	V.C. L. & A. 3 CORE.

002457-002464-00597

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
The foregoing is a correct description.

Electrical Contractors. Date

COMPASSES.

Have the compasses been adjusted under working conditions

Builder's Signature. Date

Have the foregoing descriptions and schedules been verified and found correct. ☒ Yes.

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

Plans. Are approved plans forwarded herewith. ☒ If not, state date of approval.

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. ☒

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

THE ELECTRICAL INSTALLATION TO THE STANDARDS OF THE AMERICAN BUREAU OF SHIPPING HAS BEEN IN OPERATION FOR APPROXIMATELY FOUR YEARS. ALTERNATORS AND EXCITERS EXAMINED. MAIN SWITCHBOARD EXAMINED AND ALL MECHANICAL CONNECTORS CHECKED FOR TIGHTNESS. ENGINE ROOM MOTORS EXAMINED INTERNALLY AND EXTERNALLY. EMERGENCY ALTERNATOR AND SWITCHBOARD EXAMINED. THE LIGHTING FITTINGS IN THE 'TWEEN DECK SPACE CENTRE CASTLE HAVE BEEN REPLACED WITH FLAMEPROOF FITTINGS (SWITCHES IN ACCOMMODATION ALLEYWAY). ALL LIGHTING AND POWER CIRCUITS EXAMINED AND MEGGER TESTED. ALL FOUND SATISFACTORY. THE FRESH WATER PUMP MOTOR AND PUMP REMOVED FROM 'TWEEN DECK SPACE CENTRE CASTLE AND REPOSITIONED IN THE STEWARD'S STORE IN THE OFFICERS ACCOMMODATION.

THE MATERIALS USED AND THE WORKMANSHIP ARE SATISFACTORY.

IN MY OPINION THE ELECTRICAL EQUIPMENT OF THIS SHIP IS IN A SATISFACTORY CONDITION AND ELIGIBLE TO RECEIVE THE SOCIETY'S CLASSIFICATION OF L.M.C. 9.48.

Notes 3/12/48

Total Capacity of Generators 845. 985 Kilowatts.

The amount of Fee ... £ ^{LETTER TO} ^{LONDON} : When applied for, 19. When received, 19.

Travelling Expenses (if any) £ : 19.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute. **FRI. 10 DEC 1948**

Assigned