

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

3 - JUL 1947

Received at London Office

of writing Report 14th May, 1947 When handed in at Local Office 20th May, 1947 Port of Baltimore, Maryland
 in Survey held at Baltimore, Maryland Date, First Survey 23rd March, Last Survey 15th April, 1947
 Book.
 424 on the S.S. "VASILIOS E. KULUKUNDIS" (ex "Finley Peter Dunne") Tons { Gross 7176
 Corp. Net 4380
 It at Los Angeles, California By whom built California Shipbuilding Yard No. 1678 When built 1943
 ers Messrs. Rethymnis and Kulukundis Port belonging to Syra
 ctic Light Installation fitted by California Shipbuilding Corp. Contract No. When fitted 1943
 e Vessel fitted for carrying Petroleum in bulk. No

em of Distribution Two-wire Direct Current

asure of supply for Lighting 120 volts, Heating - volts, Power 120 volts.

ect or Alternating Current, Lighting Direct Power Direct

ternating current system, state frequency of periods per second -

the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

erators, do they comply with the requirements regarding temperature rise A.I.E.E. Standards 40° C. Rise, are they compound wound Yes

hey over compounded 5 per cent. No, if not compound wound state distance between each generator -

re more than one generator is fitted are they arranged to run in parallel Yes, is an adjustable regulating resistance fitted in

s with each shunt field Yes Have certificates of test results for machines under 100 kw. been submitted and

oved - Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing -

all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed,

t circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes

tion of Generators In engine room first grating level starboard side, is the ventilation

ay of the generators satisfactory Yes are they clear of all inflammable material Yes if situated near unprotected

lwork or other combustible material, state distance of same horizontally from or vertically above the generators - and -

he generators protected from mechanical injury and damage from water, steam or oil Yes, are their axes of rotation fore and aft Yes

thing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators

etallic contact Yes Main Switch Boards, where placed In engine room on generator flat.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with
 e on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard -

chboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical

ry and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same

ontally from or vertically above the switchboards - and - are they constructed wholly of durable, non-ignitable non-absorbent

rials. Ebony Asbestos, is all insulation of high dielectric strength and of permanently high insulation resistance Yes

of an approved type Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other

ygroscopic insulating material, and the slab similarly insulated from its framework - is the non-hygroscopic insulating material of an approved

Yes, and is the frame effectively earthed Yes Are the fittings as per Rule regarding:—spacing or shielding of live parts

.E. Standards, accessibility of all parts Yes, absence of fuses on back of board Yes, temperature rise of

bus bars Yes, individual fuses to voltmeter, pilot or earth lamp on same fuses Each generator voltmeter and pilot light

position No are all screws and nuts securing connections effectively locked Yes are any fuses fitted on the live side of

hes. No Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

generator: 175 amp. D.P. breaker with overload and reverse current trips and a three pole isolating

ch. Outgoing circuits: D.P. linked switches and fuses.

urbine driven generators fitted with emergency trip switch as per rule - Are cupboards or compartments containing switchboards composed of

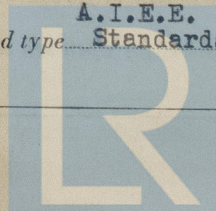
sisting material or lined with approved material Yes Instruments on main switchboard 3 ammeters 3 volt-

s - synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

es Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

h lamps also voltmeter selector switch wired to give ground readings switches, Circuit Breakers and Fusible Cut-outs,

se comply with the requirements of the Rules. A.I.E.E. Standards are the fusible cutouts of an approved type A.I.E.E. Standards have the reversed



Lloyd's Register
Foundation

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RATED AT	
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current protection devices been tested under working conditions Yes **Joint Boxes, Section and Distribution Boards,**
construction, protection, insulation, material, and position of these as per Rule A.I.E.E. Standards **A.I.E.E. Standards**
Cables: Single, twin, ~~twocore~~, or multicore Yes are the cables insulated and protected as per Tables IV, V, X or XI of the Rules
If the cables are insulated otherwise than as per Rule, are they of an approved type Yes **Fall of Pressure,** state maximum between bus bars
any point of the installation under maximum load 3 Volts **Cable Sockets,** are the ends of all cables having a section
area of 0.04 square inch and above provided with soldering sockets Yes **Paper Insulated and Varnished Cambric Insulated Cables**
If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably
with insulating compound —, or waterproof insulating tape — **Cable Runs,** are the cables fixed as far as possible in accessible position
not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk
mechanical damage Yes Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit **Lead Covered**
Support and Protection of Cables, state how the cables are supported and protected Clipped to steel supports in accommodation spaces
and holes, protected by sheet metal guards in hold spaces.
If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables
separate grooves — If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII **A.I.E.E. Standards**
Refrigerated Chambers, are the cables and fittings in accordance with the special requirements Yes
Joints in Cables, state if any, and how made, insulated, and protected In junction boxes.
Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands
Yes **Bushes in Beams and Non-watertight Partitions,** where unarmoured cables pass through beams and non-watertight partitions, are the
holes efficiently bushed Cables all armoured state the material of which the bushes are made —
Earthing Connections, state what earthing connections are fitted and their respective sectional areas Cables effectively earthed.
—, are their connections made as per Rule Yes
Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yes **Emergency Supply**
position and method of control of the emergency supply and how the generator is driven —
Navigation Lamps, are these separately wired Yes, controlled by separate switch and separate fuses Yes, are the fuses double pole No A.I.E.E. Standards
are the switches and fuses grouped in a position accessible only to the officers on watch In wheelhouse
has each navigation lamp an automatic indicator as per Rule Yes **Secondary Batteries,** are they constructed and fitted as per Rule Yes
Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight Yes
are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected
Cast metal guards
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected —
—, how are the controlling switches situated —
are all fittings suitably ventilated Yes, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials
Heating and Cooking Appliances, are they constructed and fitted as per Rule —, are air heaters constructed and fitted as per Rule —
Searchlight Lamps, No. of One, whether fixed or portable Yes, are their fittings as per Rule Yes
Are Lamps, other than searchlight lamps, No. of —, are their live parts insulated from the frame or case —, are their fittings as per Rule —
Motors, are their working parts readily accessible Yes, are the coils self-contained and readily removable for replacement Yes
are the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes, are the motors placed in well-ventilated compartments
inflammable gases cannot accumulate and clear of all inflammable material Yes, are they protected from mechanical injury and damage where possible
water, steam or oil Yes are their axes of rotation fore and aft possible, if situated near unprotected woodwork or other combustible
material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type Drip proof
—, if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —
have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing — **Control Gear and Resistances,** are the gear
field and motor speed regulators, starters and controllers constructed and fitted as per Rule **A.I.E.E. Standards** **Lightning Conductors,** where lightning conductors
are required, are these fitted as per Rule — **Ships carrying Oil having a Flash Point less than 150°F.** Have the special requirements of
the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables
and fittings — are all fuses of the filled cartridge type — are they of an approved type —
If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office —
Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule Yes

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.			
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.		
... ..	3	20	120	167	400	Steam reciprocating	-	-		
ARY ...										
ENCY ...										
Y FORMER										
GENERATOR, LIGHTING AND HEATING CONDUCTORS.										
DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED	
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	A.L.E.E.				
GENERATOR	1	.1969	37	.082	167	233 ✓	50	Rubber	L.C. and Basket-weave armoured	
USER CONNECTIONS ...										
ARY GENERATOR ...										
ENCY GENERATOR...										
Y FORMER { MOTOR										
FORMER { GENERATOR...										
E ROOM										
nd ROOM Ltg. L. 1...	1	.0521	7	.097	58	74 ✓ x	40	"	"	
ARY SWITCHBOARDS ...										
imity Ind.	1	.002	-	-	1	10 ✓ x	80	"	"	
MODATION ... L. 4...	1	.0521	7	.097	48	74 ✓ x	150	"	"	
Accommod. L 6	1	.0521	7	.097	25	74 ✓ x	440	"	"	
Deck Accom. L 7	1	.0829	19	.074	48	100 ✓ x	190	"	"	
lhouse L 8	1	.020	7	.061	16	41 ✓ x	240	"	"	
Compass L 12	1	.013	7	.048	15	41 ✓ x	200	V.C.	"	
ESS P 7.	1	.020	7	.061	22	41 ✓ x	290	Rubber	"	
HLIGHT L 10.	1	.008	7	.038	5	23 ✓ x	420	"	"	
HEAD LIGHT	1	.0032	7	.024	.42	11.5 ✓ x	440	"	"	
AGHTS	1	.0032	7	.024	.42	11.5 ✓ x	110	"	"	
SS LIGHTS										
e Deck Ltg. L. 9...	1	.0829	19	.074	50	100 ✓ x	200	"	"	
ONES . Fwd. L. 2...	1	.0521	7	.097	25	74 ✓ x	420	"	"	
ark Midships. L3.	1	.0829	19	.074	57	100 ✓ x	190	"	"	
x . Aft. ... L 5.	1	.0521	7	.097	23	74 ✓ x	270	"	"	
MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED
		No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit	A.L.E.E.			
ST PUMP										
BILGE LINE PUMPS ...										
AL SERVICE PUMP ...										
ENCY BILGE PUMP ...										
RY PUMP										
SEA WATER PUMPS ...										
FRESH WATER PUMPS..										
OMPRESSOR										
WATER PUMP										
TURNING GEAR										
E REVERSING GEAR ...										
ATING OIL PUMPS ...										
FUEL TRANSFER PUMP ...										
PASS										
ES, FORWARD										
ES, AFT... ..										
NG GEAR—										
MOTOR GENERATOR ...										
MAIN MOTOR										
HOP MOTOR... ..										
ATING FANS										
E. Comp. P 8	1	1	.0658	19	.066	59	87 ✓ x	200	Rubber	L.C. and Basket-weave Armoured

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All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Electrical Engineers.

Date

COMPASSES.

Distance between electric generators or motors and standard compass 26 feet

Distance between electric generators or motors and steering compass 26 feet

The nearest cables to the compasses are as follows:—

A cable carrying .2 Ampères .75 feet from standard compass .75 feet from steering compass.

A cable carrying 1 Ampères 4 feet from standard compass 7 feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be Nil degrees on any course in the case of the standard compass, and Nil degrees on any course in the case of the steering compass.

Builder's Signature.

Date

Is this installation a duplicate of a previous case If so, state name of vessel

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 1943. The plans attached have been examined and found in accordance with A.I.E.E. Marine Standards and generally in accordance with the Rules. The materials and workmanship are good and the installation has been examined under working conditions and found to be satisfactory, except the main generator equalizer connections are below Rule size. The dimensions in this report have been taken from the A.B.S. approved plans. These dimensions have been checked as far as possible on the ship and found correct.

In my opinion the electrical installation is such as could be accepted by the Committee for Classification, subject to the main generator equalizer connections being increased to meet Rule requirements.

Total Capacity of Generators 60 Kilowatts.

The amount of Fee	£ \$100.00	When applied for, 20 May, 19 47
Travelling Expenses (if any)	£ 3.50	When received, — 19 —

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK JUN 4 1947

Assigned Blue light.



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