

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

16 FEB 1949

Date of writing Report 31 Dec. 1948 When handed in at Local Office 31 Dec. 1948 Port of Baltimore, Maryland  
 No. in Survey held at Baltimore, Maryland Date, First Survey 25th June Last Survey 16th November 1948  
 Reg. Book. (No. of Visits 9)  
 on the S.S. "OLYMPIC GAMES" Tons { Gross 10,901  
 Net 6,549  
 Built at Sparrows Point, Maryland By whom built Bethlehem Sparrows Point Shipyard, Inc. Yard No. 4463 When built 1948  
 Owners Financiera Ariona Panama S.A. Port belonging to Puerto Cortez  
 Installation fitted by Bethlehem Sparrows Point Shipyard, Inc. When fitted 1948  
 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. - Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 2 Wire D.C. Voltage of Lighting 115 D.C.  
 Heating - Power 230 D.C. or A.C. Lighting 115 D.C. Power - If A.C. state frequency -  
 Prime Movers, has the governing been found as per Rule when full load is thrown on and off A.I.E.E. Are turbine emergency governors fitted with a trip switch Yes Generators, are they compound wound Shunt, and level compounded under working conditions -, if not compound wound state distance between generators 15 feet and from switchboard 32 ft. 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 Half on Each One. Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing A.B.S. Have certificates of test for machines under 100 kw. been supplied - and the results found as per Rule A.I.E.E. Stds.  
 Position of Generators Port side of Engine Room on 23'-9" flat  
 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 Outboard of generator on same flat.  
 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 1 1/2" thick Ebony Asbestos, if of synthetic insulating material is it an Approved Type Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule A.I.E.E. Is the construction as per Rule, including locking of screws and nuts A.I.E.E. Description of Main Switchgear for each generator and arrangement of equaliser switches One 1600 amp., 2 pole air circuit breaker with Dual mechanical overcurrent trip, one overload attachment per pole. Reverse current and undervoltage trips, also one 1600 amp. D.P. straight disconnect switch.  
 and the switch and fuse gear (or circuit breakers) for each outgoing circuit 2 pole air circuit breakers with dual mechanical overcurrent trip and one overload attachment per pole (above 200 amp. and 2 pole fused knife switches (200 amp. and below.)  
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 5 ammeters 4 voltmeters - 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 Two ground detector lamps with normally open switch in ground lead.  
 Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes, make of fuses Chase-Shawmut, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 1580 Amps., and at what current do the reversed current protective devices operate 160 Amps.  
 Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule A.I.E.E. Stds.  
 Cables, are they insulated and protected as per Rule A.I.E.E. Std., if otherwise than as per Rule are they of an Approved Type Yes, state maximum fall of pressure between bus bars and any point under maximum load 2.7%, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets Solderless lugs 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 No or of the "HR" type - State how the cables are supported or protected In galvanized steel strap hangers spaced not more than 18" where vertical and 14" where horizontal. Cables on gangway are run in galvanized steel pipes fitted with 1/2" drain holes at 5 feet intervals.  
 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 all cables armoured Refrigerated chambers, are the cables and fittings as per Rule A.I.E.E. Stds.

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule A.I.E.E. Emergency Supply, state position

Auxiliary Diesel Generator - Aft. of Boilers on 20'-9" Boiler flat.

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. No

Secondary Batteries, are they constructed and fitted as per Rule None, are they adequately ventilated. none

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. Explosion proof fixtures

and where are the controlling switches fitted. Outside such spaces Are all fittings suitably ventilated. Yes

Searchlight Lamps, No. of one, whether fixed or portable. fixed, are they of the carbon arc or of the filament type. Filament

Heating and Cooking, is the general construction as per Rule A.I.E.E., are the frames effectually earthed. Yes, are heaters in the accommodation of the convection type. None 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. A.B.S.

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule A.I.E.E.

Control Gear and Resistances, are they constructed and fitted as per Rule A.I.E.E. 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. Yes, make of fuse. Chase-Shaunty 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. Submarine Signal Co. location of transmitter. Fwd. Eng. Rm. and receiver. same

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.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	Westinghouse	300	240 DC	1250	1200	Steam Turbine	Westinghouse
Auxiliary								
EMERGENCY	1	Electric Dynamic	60	240 DC	250	1500	Diesel	Cummins
ROTAry TRANSFORMER	2	Electric Dynamic	35	120 DC	-	1700	Motor	Electric Dynamic

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	A.I.E.E. Rule.			
MAIN GENERATOR	300	3	0.3922	1562	1587	64'	V.C.	Lead & Basket Weave-A
" " EQUALISEE	-	-	-	-	-	-	-	-
Auxiliary								
EMERGENCY GENERATOR	60	1	0.2356	312	376	280'	V.C.	Lead & Basket Weave-A
ROTAry TRANSFORMER: MOTOR	60 HP	1	0.1659	269	299	100'	"	" " " "
" " GENERATOR	35	1	0.2356	365	376	100'	"	" " " "

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Midship Power Panel	1	0.0521	57	99	730'	VC Lead & Basket Weave A
After Power Panel	1	0.0329	43	75	240'	" " " "
Machine Shop Panel	1	0.0082	20	30	210'	" " " "

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	A.I.E.E. Rule.			
Navigation Lights	1	0.0130	4	41	720'	V.C.	Lead & Basket Weave Armoured
Forecastle Lighting	1	0.0829	38	188	960'	"	" " " "
Engine Room Lighting	1	0.0329	53	75	60'	"	" " " "
Boiler Room Lighting	1	0.0329	45	75	120'	"	" " " "
After Quarters Lighting	1	0.1659	112	299	100'	"	" " " "
Midship Quarters Lighting	1	0.3922	100	529	650'	"	" " " "
Pump Room Lights	1	0.0051	8	22	230'	"	" " " "
Cargo Circuit Lighting	1	0.0329	15	75	620'	"	" " " "
Echo Depth Sounder	1	0.0130	5	41	750'	"	" " " "
Radio	1	0.0130	15	41	630'	"	" " " "
Gyro Compass	1	0.0082	8	30	750'	"	" " " "
Galley Range (12KW)	1	0.0329	53	75	230'	"	" " " "
D.C. I.C. Systems Feeder	1	0.0051	3	22	60'	"	" " " "
A.C. I.C. Systems Feeder	1	0.0051	2	22	40'	"	" " " "
Radar	1	0.0082	8	30	120'	"	" " " "
Galley Cripple (4KW)	1	0.0082	17	30	130'	"	" " " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	A.I.E.E. Rule.			
Main Cargo Pumps	2	250	3	0.2356	1100	1128	170'	V.C.	Lead & Basket Weave Armoured
Main Circulator	1	75	1	0.2356	338	376	100'	"	" " " "
Auxiliary Circulator	1	25	1	0.0829	118	188	100'	"	" " " "
Forced Draft Fans	2	30	1	0.0829	138	188	260'	"	" " " "
Tube Oil Service Pump	1	15	1	0.0329	70	75	210'	"	" " " "
Main Condensate Pumps	2	15	1	0.0329	70	75	150'	"	" " " "
Auxiliary Condensate Pumps	1	7.5	1	0.0130	36	30	100'	"	" " " "
General Service Pump	1	10	1	0.0206	47	55.5	180'	"	" " " "
Fuel Oil Service Pump	2	7.5	1	0.0130	36	41	220'	"	" " " "
Sanitary Pump	1	7.5	1	0.0082	36	41	190'	"	" " " "
Air Compressor	1	5	1	0.0082	25	30	240'	"	" " " "
Refrigeration Compressor	1	7.5	1	0.0130	36	41	250'	"	" " " "
Twinning Gear	1	5	1	0.0082	25	30	160'	"	" " " "
Tube Oil Purifier	1	2	1	0.0082	10.4	30	190'	"	" " " "
Pump Room Vent Fan	1	1.25	1	0.0051	6.2	22	190'	"	" " " "
Drinking Water Pump	1	.75	1	0.0051	4.1	22	270'	"	" " " "
Wash Water Pump	1	.75	1	0.0051	4.1	22	180'	"	" " " "
Steering Gear Pumps	2	30	1	0.0829	146	188	340'	"	" " " "
Gyro Pilot Drive	1	-	1	0.0051	8	22	70'	"	" " " "
Lathe	1	2	1	0.0051	10	22	120'	"	" " " "
Drill Press	1	1	1	0.0051	5	22	80'	"	" " " "
Grinder	1	2	1	0.0051	10	22	40'	"	" " " "
I.C. Rotary Convertors	2	1.5 KVA	1	0.0051	10.4	22	90'	"	" " " "
Drink Water Pump (Midship)	1	.75	1	0.0051	4.1	22	110'	"	" " " "
Vent Fan (Midships)	1	1.625	1	0.0051	8.5	22	106'	"	" " " "
" " " "	1	1.5	1	0.0051	7.8	22	102'	"	" " " "
" " (After quarters)	1	1.5	1	0.0051	7.8	22	162'	"	" " " "
" " " "	1	.875	1	0.0051	4.9	22	186'	"	" " " "
" " " "	1	1.25	1	0.0051	6.2	22	108'	"	" " " "
" " " "	1	.625	1	0.0051	4.9	22	162'	"	" " " "
" " " "	1	.625	1	0.0051	3.4	22	210'	"	" " " "
" " " "	1	7.5	1	0.0051	3.4	22	190'	"	" " " "

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... No..... If so, state name of vessel..... -

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

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith... No.....

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

Classification:- The generators and motors were built under special survey in accordance with the requirements of the American Bureau of Shipping. The electrical installation has been carried out under the supervision of the undersigned surveyor and in accordance with the Rules of this Society.

The dimensions in the report have been taken from the approved plans and checked on the ship and found correct. The material and workmanship is good, the installation examined under working conditions and found satisfactory.

The engine speed governors, overspeed, reverse current and over current trips tested satisfactorily and when generators were paralleled, the load sharing found satisfactory and in accordance with Section 21 of the Rules for Electrical Equipment.

The spare gear conforms to Section 22.

It is the opinion of the undersigned that the Electrical installation is eligible to be classed with this Society with record of LMC 11-48.

*Noted but 18/5/49.*

Total Capacity of Generators... 660 ✓ ..... Kilowatts.

Arranged			
The amount of Fee ...	£ 350.00	:	When applied for,
			17-1-1949
			When received,
Travelling Expenses (if any) £	27.00	:	19.....

*G. H. Haman*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... **NEW YORK JAN 19 1949**.....

Assigned *Elec light*.....

2M.9.48.—Transfer: (The Surveyors are requested not to write on or below the space for Committee's Minute.)

