

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 29 JUN 1954

Date of writing Report 7th May 19 54 When handed in at Local Office 19 54 Port of Baltimore, Maryland

No. in Survey held at Sparrows Point, Maryland Date, First Survey 1st May Last Survey 27th April 19 54
Reg. Book. (No. of Visits 20)

36461 on the S. S. "JOHN P. G." Tons { Gross 18717
Net 11567

Built at Sparrows Point, Maryland By whom built Bethlehem Sparrows Point Shipyard, Inc. Yard No. 4522 When built 1954

Owners Balboa Compania Naviera S.A. Port belonging to Panama

Installation fitted by Bethlehem Sparrows Point Shipyard Inc. When fitted 1954

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 20 Radar yes

Plans, have they been submitted and approved yes System of Distribution 3 phase 3 wire for power and lighting feeders 117
Voltage of Lighting
Heating - Power 450 ~~D.C.~~ A.C., Lighting A.C. Power A.C. If A.C. state frequency 60
2 wire, single phase for lighting branch circuits

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 A.C., and level compounded under working conditions -

if not compound wound state distance between generators. A.C. and from switchboard - Are the generators arranged to run in parallel yes, are ~~excitor~~ 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 yes Have certificates of test for machines under 100 kw. been supplied yes and the results found as per Rule A.I.E.E.

Position of Generators One forward of other in after machinery space
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 Starboard and adjacent to generators

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 metal faced, 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 - 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. Dead front three pole air circuit breakers with disconnect links.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. All circuits protected by dead front air circuit breakers, thermal overload, and magnetic short circuit protection.

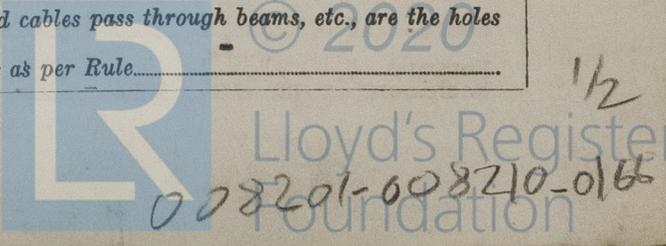
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule - Instruments on main switchboard Two ammeters three voltmeters three synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection. - Earth Testing, state means provided ground detection lamps and pushbutton.

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type Std.N.E.C. yes make of fuses Std. N.E.C., are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate. 825 amp long time delay and at what valve do the reversed power protective devices operate. 2 seconds of reverse power 1600 short time delay

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule. A.I.E.E. Std.

Cables, are they insulated and protected as per Rule yes, if otherwise than as per Rule are they of an Approved Type A.I.E.E. Std. state maximum fall of pressure between bus bars and any point under maximum load 5%, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets. no pressure type 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. in brass pipes in gangways otherwise in exposed flat bar hangers.

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. - 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
 Upper engine room 75 K.W. Diesel

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... **none**, are they adequately ventilated... **-**
 state battery capacity in ampere hours... **-**

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... **no**
 if so, how are they protected... **-**

and where are the controlling switches fitted... **-** Are all fittings suitably ventilated... **yes**

Searchlight Lamps, No. of **two**, whether fixed or portable **one each**, 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... **yes**

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.** Lightning 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... **yes** Std. N.E.C. 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... **Bludworth** location of transmitter... **P. & S. of centre** and receiver... **same as transmitter**
 line Bot. frames 49-50

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.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN	Two	Westinghouse	400	450A.C.	642	1200	Turbine	Westinghouse
EMERGENCY ROTARY TRANSFORMER	One	Westinghouse	75	450A.C.	120	1200	Diesel	Cummins
	Two	Westinghouse	5	120D.C.	43.5	1800	Motor	Westinghouse

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.	Rule.			
MAIN GENERATOR	400	3	.7068	802	837	28	V.C.	Lead, bronze armoured basket weave
" " EQUALISER								
EMERGENCY GENERATOR	75	1	.1045	150	158	25	"	" " " "
ROTARY TRANSFORMER: MOTOR	7.5	1	.0051	10.5	22	35	"	" " " "
" " GENERATOR	5	1	.0206	43.5	55.5	34	"	" " " "

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

DESCRIPTION.								
Main Switchboard to Forward Switchboard	1	.1045	54.4	158	425	"	"	"
" " " Emergency Switchboard	1	.1045	31.6	158	20	"	"	"
Emergency Switchboard to Forward Switchboard	1	.0206	24.6	55.5	410	"	"	"
Machine Shop Panel	1	.0206	23.4	55.5	20	"	"	"
Boiler Room Panel	1	.0130	17.2	41	105	"	"	"
Machinery Space Vent Panel - Bus. 1	1	.0521	59	99	120	"	"	"
After Quarters Vent Panel	1	.0130	18.3	41	45	"	"	"
Galley Service 450/230V Transformer Pri.	1	.0521	69.8	99	105	"	"	"
Shore Line	1	.1659	200	217	150	"	"	"
Main Switchb'd to 450/117 V. Transformer	Pri. 1	.0521	51.5	99	25	"	"	"
Emerg. " " " " " "	1	.0130	10.1	41	15	"	"	"
Forward " " " " " "	1	.0206	28.8	55.5	15	"	"	"
Machinery Space Vent Panel - Bus. 2	1	.0051	19.5	22	90	"	"	"

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

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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.	Rule.			
Upper deck lighting	1	.1045	53.8	158	80	V.C.	Lead, bronze armoured basket weave
Poop deck lighting	1	.0521	48.2	99	90	"	" " " "
Engine room lighting	1	.0521	47.2	99	15	"	" " " "
Boiler room lighting	1	.0521	30	99	105	"	" " " "
Midship lighting	1	.0521	56.8	99	25	"	" " " "
Midship emergency lighting	1	.0206	27.8	55.5	45	"	" " " "
After quarters emergency lighting	1	.0130	16.7	41	75	"	" " " "
Engine room emergency lighting	1	.0051	13.0	22	15	"	" " " "
Boiler emergency lighting	1	.0130	8.4	41	100	"	" " " "
Radio feed	1	.0051	6.8	22	55	"	" " " "
Navigating light panel	1	.0082	2.6	30	45	"	" " " "
Radar feeder	1	.0130	12.0	41	40	"	" " " "
Echo sounding system	1	.0051	3.5	22	25	"	" " " "
Searchlight 18"	1	.0051	8.7	22	50	"	" " " "
Masthead lights	1	.0032	0.52	11.5	174	R.C.	" " " "
Sidelights	1	.0032	0.52	11.5	35	R.C.	" " " "
Cargo lights forward	1	.0082	5.2	30	60	V.C.	" " " "
After pump room lighting	1	.0130	5.2	41	197	"	" " " "
Forecastle lights	1	.0206	6.7	55.5	210	"	" " " "
Gyro pilot	1	.0051	3.0	22	100	"	" " " "
Steering gear room lights	1	.0051	3.9	22	93	"	" " " "
Pump room lights for'd	1	.0130	2.6	41	206	"	" " " "
Cargo lights aft.	1	.0051	5.2	22	75	"	" " " "
Direction finder	1	.0032	2.0	11.5	55	R.C.	" " " "
Radio telephone	1	.0051	6.3	22	40	V.C.	" " " "
Range light	1	.0032	0.52	11.5	275	R.C.	" " " "
Stern light	1	.0032	0.52	11.5	425	"	" " " "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Main cond's'r circ. pump	1	125	.1	.1659	155	217	130	V.C.
Forced draft blowers	2	83	1	.1659	100	217	120,100	"
Fire and general service	1	50	1	.0521	59.5	99	75	"
Fuel oil trans. pump	1	30	1	.0521	40.4	99	90	"
Lube oil service pumps	2	25	1	.0206	32.2	55.5	25,20	"
Air compressor	1	25	1	.0206	31.3	55.5	130	"
Main cond's'r cond. pumps	2	20	1	.0130	25.1	41	140,145	"
Atmos. exh. cond. circ. pump	1	20	1	.0130	25.1	41	115	"
Water service pumps	2	15	1	.0130	19.2	41	120,125	"
Fuel oil service pumps	2	15	1	.0130	19.3	41	95,100	"
Bilge and ballast pump	1	15	1	.0130	19.2	41	120	"
Aux. cond's'r. circ. pumps	2	10	1	.0051	13.0	22	55,60	"
Aux. cond's'r. cond. pumps	2	10	1	.0051	13.0	22	55,60	"
Sanitary pump	1	7.5	1	.0051	10.5	22	120	"
Refrig. compressors	2	7.5	1	.0051	10.0	22	45,50	"
Turning gear	1	7.5	1	.0051	10.0	22	70	"
Combustion control comp.	1	5	1	.0051	6.9	22	100	"
Distiller condensate pumps	2	3	1	.0051	4.0	22	75,95	"
Brine overboard disch. pumps	2	3	1	.0051	4.0	22	80,90	"
Wash water pumps	2	3	1	.0051	4.1	22	50,60	"
Steering gear	2	50	1	.0521	58.1	99	95,135	"

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Lloyd's Register Foundation

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..... Yes

George
 BETHLEHEM-SPARROWS POINT
 SHIPYARD, INC.
 SPARROWS POINT, MD.

..... Builder's Signature. Date *27th April 1954*

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 *S.S. ANDROS SEA*

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..... Yes

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

The electrical equipment of this vessel has been built under Special Survey in accordance with the A.I.E.E. marine rules and regulations. The electrical units with all fittings, cables and fastenings have been installed on board the vessel in compliance with the rules.

The material and workmanship throughout are good. Upon completion the entire electrical system was examined under full load conditions with satisfactory results.

The engine speed governors, over speed, reverse current and over current trips were satisfactorily tested. The generators were paralleled and the load sharing was found to be satisfactory and in accordance with section 24 of the rules for electrical equipment.

In my opinion the Electrical Equipment is eligible to be classed and recorded.
 Copies of generator test certificates and motor construction affidavits attached hereto.

Approved plans forward with report. *22.*

Approved Drawings forwarded with Report

1. Emergency Switchboard
2. Forward Ships Service & emergency Dist. switchboard.
3. Main forward & emergency switchboard.
4. Main gen. & Dist. switchboard
5. A.C. generator outline.
6. Geared turbine generator outline.
7. Electrical installation bridge deck house.
8. Electrical installation upper deck Aft.
9. Electrical installation upper deck & forecastle
10. " " *Index list & general notes*
11. " " *one hive diagram*
12. " " *poop deck & poop house top.*
13. " " *cable rack engine & boiler rooms.*
14. " " *upper engine & boiler rooms*
15. " " *lower engine & boiler rooms.*

*Noted 95
5/7/54*

Total Capacity of Generators..... *875* ✓ Kilowatts.

The amount of Fee £ : : When applied for,
 19
 When received,
 Travelling Expenses (if any) £ : : 19

D.H. McKenzie
 Surveyor to Lloyd's Register of Shipping.

NEW YORK JUN 9 1954

Committee's Minute.....

Assigned..... *Blue light.*

