

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

28 DEC 1945

Received at London Office

Date of writing Report Nov. 22 1945 When handed in at Local Office ..... 19..... Port of Saint John, N. B.  
 No. in Survey held at Saint John, N. B. Date, First Survey July 25 Last Survey Nov. 14 1945  
 Reg. Book. (Number of Visits 23)  
 on the steel single screw steamer "SHAKESPEARE PARK" Tons { Gross 2894  
 Net 1649  
 Built at Saint John, N. B. By whom built St. John Drydock and Shipbuilding Co. Ltd. Yard No. 21 When built 1945  
 Owners Canadian Government Port belonging to Montreal  
 Electric Light Installation fitted by St. John Drydock & Shipbuilding Contract No. Co. Ltd. When fitted 1945  
 Is the Vessel fitted for carrying Petroleum in bulk No

System of Distribution Two conductor insulated

Pressure of supply for Lighting 115 ✓ volts, Heating -- volts, Power -- volts.

Direct or Alternating Current, Lighting Direct current ✓ Power --

If alternating current system, state frequency of periods per second --

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

Generators, do they comply with the requirements regarding temperature rise Yes, are they compound wound Yes

are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator --

Where more than one generator is fitted are they arranged to run in parallel Yes, is an adjustable regulating resistance fitted in series with each shunt field Yes

Have certificates of test results for machines under 100 kw. been submitted and approved Yes

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

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

Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Stbd. side of E.R. operating platform between frames Nos. 65-76, is the ventilation in way of the generators satisfactory Yes

are they clear of all inflammable material Yes, if situated near unprotected

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

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

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes, are the prime movers and their respective generators in metallic contact Yes

Main Switch Boards, where placed Stbd. side of E.R. on platform above generators, 24" from Coal Bunker Bulkhead

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

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam or oil Yes

, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards -- and --, are they constructed wholly of durable, non-ignitable non-absorbent materials Yes

, is all insulation of high dielectric strength and of permanently high insulation resistance Yes

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

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

, accessibility of all parts Yes, absence of fuses on back of board Yes, temperature rise of omnibus bars Yes

, individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the "off" position No

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

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Main switches and equalizer switches operate in parallel and have automatic overload protector

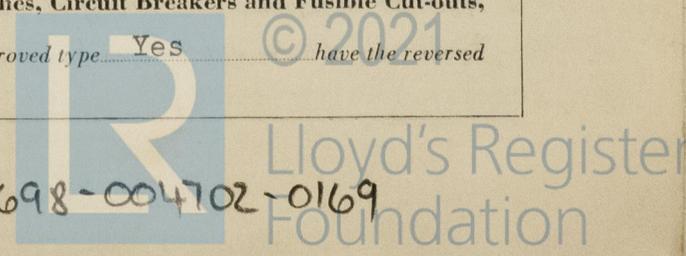
Are turbine driven generators fitted with emergency trip switch as per rule -- Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material --

Instruments on main switchboard Yes ammeters Yes voltmeters Yes

Yes for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection Yes

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

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes are the fusible cutouts of an approved type Yes have the reversed



current protection devices been tested under working conditions  **Yes** **Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule**  **Yes**

**Cables:** Single, twin, concentric, or multicore  **Single** are the cables insulated and protected as per Tables IV, V, X or XI of the Rules  **Yes**

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 and any point of the installation under maximum load**  **Negligible** **Cable Sockets, are the ends of all cables having a sectional 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 sealed with insulating compound  **---**, or waterproof insulating tape  **---** **Cable Runs, are the cables fixed as far as possible in accessible positions 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 of mechanical damage**  **Yes** **Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit**  **Conduit**

**Support and Protection of Cables, state how the cables are supported and protected**  **In strong steel conduits**

If cables are run in wood casings, are the casings and caps secured by screws  **---**, are the cap screws of brass  **---**, are the cables run in separate grooves  **---**. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII  **Yes**

**Refrigerated Chambers, are the cables and fittings in accordance with the special requirements**  **---**

**Joints in Cables, state if any, and how made, insulated, and protected**  **No joints**

**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**  **Yes** **state the material of which the bushes are made**  **Lead**

**Earthing Connections, state what earthing connections are fitted and their respective sectional areas**  **Ground lamps only**

**---**, are their connections made as per Rule  **Yes**

**Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule**  **---** **Emergency Supply, state position and method of control of the emergency supply and how the generator is driven**  **Oil lamps and hand battery lamps**

**Navigation Lamps, are these separately wired**  **Yes**, controlled by separate switch and separate fuses  **Yes**, are the fuses double pole  **Yes**, are the switches and fuses grouped in a position accessible only to the officers on watch  **Yes**

has each navigation lamp an automatic indicator as per Rule  **Yes** **Secondary Batteries, are they constructed and fitted as per Rule**  **---**

**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  **No**

**---**, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected  **No**

**---**, how are the cables led  **---**

where are the controlling switches situated  **---**

are all fittings suitably ventilated  **---**, 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**  **---**, whether fixed or portable  **---**, are their fittings as per Rule  **---**

**Arc 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 in which inflammable gases cannot accumulate and clear of all inflammable material  **Yes**, are they protected from mechanical injury and damage from water, steam or oil  **Yes** are their axes of rotation fore and aft  **Yes**, 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  **---**, 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 generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule**  **---** **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, lights and fittings**  **---** are all fuses of the filled cartridge type  **Yes** are they of an approved type  **Yes**

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office  **Yes**

**Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule**  **Yes**

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Rev. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	15	115	130	575	Single cylinder vertical engine		
AUXILIARY						8" x 4"		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION	AWG Size	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	Rule.			
MAIN GENERATOR	#0000	1	0.1659	19	.1056	130	160	50 ft.	Rubber	Strong steel conduits
EQUALISER CONNECTIONS		1	0.1659	19	.1056	130	160	50 ft.	"	"
AUXILIARY GENERATOR										
EMERGENCY GENERATOR										
ROTARY TRANSFORMER										
ENGINE ROOM	#14	1	0.0032	7	.0242	5	11.5	60 ft.	"	"
BOILER ROOM	#14	1	0.0032	7	.0242	5	11.5	75 ft.	"	"
AUXILIARY SWITCHBOARD	#4	1	0.0029	7	.0772	35	56.0	100 ft.	"	"
ACCOMMODATION	#12	1	0.0051	7	.0305	5	16.5	250 ft.	"	"
WIRELESS	#6	1	0.0206	7	.0612	13	41	180 ft.	"	"
SEARCHLIGHT										
MASTHEAD LIGHT	#14	1	0.0032	7	.0242	5	11.5	140 ft.	"	"
SIDE LIGHTS	#14	1	0.0032	7	.0242	5	11.5	50 ft.	"	"
COMPASS LIGHTS	#14	1	0.0032	7	.0242	5	11.5	25 ft.	"	"
POOP LIGHTS	#14	1	0.0032	7	.0242	5	11.5	50 ft.	"	"
CARGO LIGHTS	#12	1	0.0051	7	.0305	7	16.5	50 ft.	"	"
ARC LAMPS										
HEATERS	#12	1	0.0051	7	.0305	5	16.5	250 ft.	"	"

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	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										
D.G. Motor #0000	2	1	0.1659	19	.1055	115	418.0	60 ft.	Rubber	Strong steel conduits
D.G. Generators #0000	2	1	0.1659	19	.1055	333	418.0	100 ft.	"	"
Refrigerator #10	1	1	0.0032	7	.0385	24	28.0	80 ft.	"	"
Refrig. Circ. Pump #14	1	1	0.0032	7	.0242	10	11.5	150 ft.	"	"
Wireless Converter #6	1	1	0.0206	7	.0612	46	52.0	175 ft.	"	"

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 64 ft.

Distance between electric generators or motors and steering compass 56 ft.

The nearest cables to the compasses are as follows:—

A cable carrying 2 Ampères 4 feet from standard compass 4 feet from steering compass.

A cable carrying 3 Ampères 8 feet from standard compass 6 feet from steering compass.

A cable carrying 3 Ampères 8 feet from standard compass 6 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

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

For St. John Dry Dock & Shipbuilding Co. Ltd.

*J. M. Kase*  
General Superintendent

Builder's Signature.

Date

Is this installation a duplicate of a previous case Yes If so, state name of vessel Rockwood Park, Dartmouth Park, Fawcner Park, Taronga Park, Bloomfield Park, Oakmount Park, Argyle Park.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The electrical equipment of this vessel has been fitted in accordance with the Society's Rules and Regulations; the materials and workmanship used throughout are of good and sound quality. The installation has been tested under full working conditions and found satisfactory.

Total Capacity of Generators 30 Kilowatts.

The amount of Fee ... \$95.00 ✓

When applied for,

Nov 28 1945

When received,

19

Travelling Expenses (if any) £ Included with

Engine Report.

FRI. 18 JAN 1946

Committee's Minute

Assigned

See F.E. machy. rph.

*J. B. The Ghu*  
Surveyor to Lloyd's Register of Shipping.