

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

24 JUN 1943

Received at London Office

Date of writing Report May 10 1943 When handed in at Local Office Port of Saint John, N. B.

No. in Survey held at Saint John, N. B. Date, First Survey Dec. 7 Last Survey April 30 19 43
Reg. Book. (Number of Visits 37)

on the single screw steamer "DARTMOUTH PARK" Tons { Gross 2877
Net 1655

Built at Saint John, N. B. By whom built St. John Drydock and Shipbuilding Co. Ltd. Yard No. 15 When built 1943
H.M. the King, in right of Canada,

Owners represented by the Minister of Munitions and Supply Port belonging to Montreal

Electric Light Installation fitted by St. John Drydock & Shipbuilding Co. Ltd. Contract No. When fitted 1943

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 ---

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 Starboard 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 Starboard side, bunker bulkhead behind forward generator

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 Yes

, 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 ---

, 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 ---

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

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

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 ---

All attached

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 Yes, or waterproof insulating tape Yes **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 rigid steel conduits for lighting 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, all distribution boxes, generators, motors, conduits, switch board frame.

-, 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 Yes

-, 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 Yes **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



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PARTICULARS OF GENERATING PLANT.

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.
MAIN	2	15	115	130	575	Single cylinder vertical steam engine 8" x 4"		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

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.	Rule.			
MAIN GENERATOR	1	.458	19	.1056	130	184	50 ft.	Rubber	Rigid steel conduits
EQUALISER CONNECTIONS	1	.458	19	.1056	-	-	50	"	"
AUXILIARY GENERATOR	-	-	-	-	-	-	-	-	-
EMERGENCY GENERATOR... ..	-	-	-	-	-	-	-	-	-
ROTARY TRANSFORMER { MOTOR GENERATOR... ..	-	-	-	-	-	-	-	-	-
ENGINE ROOM	1	.040	7	.0242	5	10	60		
BOILER ROOM	1	.040	7	.0242	5	10	75		
AUXILIARY SWITCHBOARDS	1	.137	7	.0772	35	84	100	Rubber	Rigid steel conduit
ACCOMMODATION	1	.047	7	.0305	5	15	250	"	"
WIRELESS	1	.107	7	.0612	13	46	180 ft.	"	"
SEARCHLIGHT	1	.040	7	.0242	5	10	140	"	"
MASTHEAD LIGHT	1	.040	7	.0242	5	10	50	"	"
SIDE LIGHTS	1	.040	7	.0242	5	10	25		
COMPASS LIGHTS	1	.040	7	.0242	5	10	50		
POOP LIGHTS	1	.040	7	.0242	5	10	50		
CARGO LIGHTS	1	.047	7	.0305	7	15	F.50 A.50		
ARC LAMPS	-	-	-	-	-	-	-		
HEATERS	1	.047	7	.0305	5	15	250		

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. Motors	2	1	.458	19	.1055	115	300	60	Rubber	Rigid Steel conduits
D.G. Generators	2	1	.558	19	.1055	333	350	100	"	"
Refrigerator	1	1	.062	7	.0385	24	24	80	"	"
Refrig. Circ. Pump.	1	1	.040	7	.0242	10	10	150	"	"
Wireless Converter	1	1	.107	7	.0612	46	46	175	"	"



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.

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

W. H. Fraser
General Superintendent

Electrical Engineers.

Date *MAY 15TH 1943*

COMPASSES.

Distance between electric generators or motors and standard compass..... 64 feet.

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

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..... Yes

The maximum deviation due to electric currents was found to be 7 degrees on South East course in the case of the standard compass, and 5 degrees on Various course in the case of the steering compass.

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

W. H. Fraser
General Superintendent

Builder's Signature.

Date *MAY 15TH 1943*

Is this installation a duplicate of a previous case Yes If so, state name of vessel "ROCKWOOD 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, May 12 1943

Travelling Expenses (if any) £ : When received, 19__
Included with Engine Report

P. B. McQueen
Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... FRI 18 JUN 1943

Assigned..... *see minute on J.E. Rph.*

Im-4-42.—Transfer. Printed in U.S.A.
(The Surveyors are requested not to write on or below the space for Committee's Minute)



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