Electro-Mechanical Generating Machine

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Abstract

This study perceptively viewed in electromagnetic radiation is intertwined in the concept of Faraday's and Lenz' Law respectively which utilize free energy. The device will contribute in the preservation of clean air and prevent climate change. Electro-mechanical Generating Machine aimed to determine the voltage output, volt-ampere (VA), revolution per minute (RPM), frequency,efficiency,charging and discharging rate of battery. The testing process was done using the specific load of 40 watts LED lamp in three (3) trials.

Findings revealed that the mean of 210 volts of output alternating voltage (AC) was stable, 4.6 volt-ampere (VA) indicate that the banking power input works to delay power loss, a mean of 2.93 volt-ampere reflect that the banking output back-up to prevent suddenly discharging of battery B to delay drain of power and gradual loss of electric field, a mean of a total power of 1.97 watts includes electrical loss and, rotational loss, power loss reflects reduces magnetomotive force (fm), a mean of 1096.66 rpm indicate speed reduction of 53.34 rpm, and a mean of 62.8% in the frequency of machine work mild performance. It also revealed that the mean of 8.8 volts charging rate of the battery reflect excellent charging and a mean of 10.66 volts in discharging at 12 hours also reflect that the battery is not discharging.

It is a unique energy conversion machine, a fuel less device that generates electric power using free energy. In contrast to the other generating device, it is noiseless, smoke free, toxic free and a saving device.

Keywords: Green Technology, Energy Conservation, regenerative power

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INTRODUCTION

The new millennium plays witness to the relentless, response to the inevitable loaning energy crisis, fuel shortage, global warming, and environment devastation due to detrimental mining for fuel and coals, notwithstanding the unreasonable priced cost of fuel. Clean technology is one of the catch phrases for this reinvention of commerce. It includes renewable energy technology breakthrough in clean environment.

For our wise and proper handling, to hold effective and practical plan implementing change or innovation of product or machineries that prevent much of the environment catastrophe which we live in, we have to adapt and renew program the way we power all our activities. We should think of other aspects of our lives to perceive and create more than just a wellness environment for existence. Renew and focus on what is really safe for a green living.

Generally, the study aimed to develop an electro-mechanica l generating machine (EMGM). Specifically, it aimed to determine the voltage output (VO), volt-ampere (VA), total power loss, speed (rpm), frequency (f), efficiency (η) and determine the charging and discharging rate of the product.

MATERIALS AND METHODS

The researcher used monopoles permanent magnets embedded at fiber rotor disc, magnetic copper conductors wound at insulated silicon steel as stator field of electromagnetic motor. Stator fields are computed both primary and secondary windings based in input and output voltage of the design circuit.

Regenerative design of electro-mechanical generating machine which is the overview of recycling process leading to the ultimate strategic option for innovation/modification or redesigning the system in collaboration to contribute for free air pollution reduction. The core vital function of the system network generate power without fuel, no smoke emission and no noise. System network as part are integrated and control system works together in sequence operation. These parts are the process (input circuit, output circuit, feedback circuit) and electro-motor. These device restore, renew and regenerate power within the system network in recycle process. It is responsible to build-up electric field.

The backing coils is responsible to recycle voltage as back-up source in charging process of electromotive force. Capacitors as an electronics component for storing the electric charge and filtering of pulsating current, it is responsible to hold voltage fluctuation. Permanent magnets (Pm) has the property of producing magnetic flux which emanate in all direction, using mono polo charge (like charge) to react resultant and repulsion force revolving the disc in centrifugal motion. The device was tested three (3) trials in three (3) hours per trial.

The rating scale and interpretation in the performance of the electro-mechanical generating machine are as follows:

AC-Output Voltage

Mean	Interpretation	Description
199.01-210.00	Stable	Excellent voltage generation to sustain load
189.01-199.00	Slightly Stable	Voltage slightly sustaining the load
180.00-189.00	Unstable	Not essential to drive electrical machine

Volt-Ampere

Mean	Interpretation	Description
4.51-5.50	Stable	Banking power work to delay power loss
3.51-4.50	Slightly Stable	Power drive reduce gradually (tolerable)
1.00-3.50	Unstable	Power loss gradually, Gradually loss of electric field, weak current charging rate

Revolution per Minute (rpm)

Mean	Interpretation	Description
1201.00 -1500.00	Stable	Banking power work to delay power loss
	High Speed	Constant speed at steady state revolution per minute
900.01 -1200.00	Moderate Speed	Nominal speed work as, 6 pole electrical machine
600 - 900	Low-speed	Speed reduction indicate working at 8 poles electrical machine.

RESULTS AND DISCUSSION

Electro-mechanical Generating Machine's AC Voltage Output

The machine's AC voltage output is stable at 210 volts (Table 1). Fluctuations on voltage may damage appliances or devices.

Table 1. AC voltage output generated by electro-mechanical generating machine.

Time	Controlled voltage	Trial Volts			Mean	Verbal Interpretation
		1	2	3		
3 hours	210	210	210	210	210	Stable voltage

Power in Volt-Ampere (VA) of Electro-mechanical Generating Machine

The machine's banking power works to delay power loss with a mean of 4.6 VA at full load (Table 2). It also contributed in spinning the rotor disc by magnetomotive force (Fm) to help achieved maximum speed. Also reflected a mean of 2.93VA, bankingpowerthat back-up the machine to prevent sudden discharge of battery B, delay drain off of power, and gradual loss of electric field.

Table 2. Power in Volt-Ampere (VA) of electro-mechanical generating machine.

	Time	Controlled volt-ampere	Trial Volt-Ampere (VA)			Mean	Quality Description
			T1	T2	T3		
Power Input	3 hours	4.8	4.8	4.6	4.4	4.6	Work responsive
Power Output	3 hours	4.0	4.0	3.0	2.0	2.93	Gradually loss of electric field

Total power loss considered rotational loss and electrical loss at the circuit such as heat loss equal to copper loss, field loss and capacitor power loss as electrical losses. core loss assume negligible using silicon steel as stator core, friction energy loss also negligible super cede by non magnetic light fiber disc on bearing and monopole magnets and none polarize field magnets acted a repulsion force that spin the rotor disc. It reflect there is a need to replace magnets into a strong one to reduce the rotational loss.

Total Power Loss = Electric Loss + Rotational Loss
= 0.66Watts + 1.31 watts
= 1.97 watts

Power in Volt-Ampere (VA) of Electro-mechanical Generating Machine

Data revealed a mean of 1096.66 rpm which indicate speed reduction of 53.34 rpm from controlled 1150 rpm (Table 3). This is equivalent to 6 poles operate at 900 rpm electrical machine.

Table 3. Revolution per minute (rpm) of electro-mechanicalgenerating device.

Time	Controlled speed	Trial Volt-Ampere (VA)			Mean	Quality Description
		T1	T2	T3		
3 hours	1150	1150	953.34	900	1096.66	The machine works almost as a 6 pole machine

Frequency of Electro-Mechanical Generating Machine

Data revealed a mean of 56.3 Hz at full load with a slight difference of 3.7 Hz as compared to 60 Hz standard frequency for a generating machine (Table 4).

Table 4. Frequency of Electro-mechanical generating machine.

Time	Controlled frequency	Trial Volt-Ampere (VA)			Mean	Quality Description
		T1	T2	T3		
3 hours	57.6	57.6	56.5	55	56.36	Standard frequency

Efficiency of Electro-mechanical Generating Machine

The data revealed the effiency of electro-mechanical generating machine (Table 5). Data revealed a mean of 62.81% efficiency at full load which is interpreted mild performance.

Table 5. Efficiency of electro-mechanical generating machine.

Time	Controlled frequency	Trial Volt-Ampere (VA)			Mean	Quality Description
		T1	T2	T3		
3 hours	83.33	83.33	62.25	42.85	62.81	Mild Performance

Charging and Discharging Rate of Battery

Data show a mean of 8.8 volts which is interpreted as excellent in charging seven (7) plates, twelve volt battery for twelve (12) hours, it also has a constant current charging of 0.4 amperes. Likewise, the discharging rate had a mean of 10.66 volts and interpreted as not draining. This means that it can stand to operate the machine up to twelve (12) hours and onwards with a constant current of 0.37 amperes.

Table 6. Charging and discharging rate of battery.

Prime DC Voltage	Trial Volt-Ampere (VA)			Mean	Quality Description
	T1	T2	T3		
Battery Charge 0.2 volts output circuit	2.5V	11.00V	13.00V	8.8V	Excellent Charging
Charging current	0.096A	0.423A	0.50A	0.40A	Constant Current Charging
Battery 12v voltage drain input circuit	11.00V	10.56V	10.00V	10.66V	Not Draining
Discharging Current	0.40A	0.365A	0.347A	0.371A	Constant Current No discharging

CONCLUSIONS

Based on the findings the following conclusionswere derived: The machine generates stable alternating current voltage of 210 volts with a load of 40 watts LED lamp, back-up power work both ways to prevent delay power loss, multi-stage of permanent magnets installed that maintain magnetomotive force (Fm) to have a constant speed, there is a need to reprove magnetic circuit and allocate permanent strong magnet to share strong repulsive force, reproved magnetic circuit and magnetomotive force (Fm) to lead booster power made the efficiency high performance. Further, it has an excellent charging feature on five (5) plates, twelve (12) volts battery.

RECOMMENDATIONS

It is highly recommended that the electro-mechanical generating machine be further improve to increase its KVA rating.The machine should be utilized since it is fuel-less, noiseless, and environmental friendly, metal casting will be used to provide mechanical protection.Further innovation for the design to produce larger KVA rating is likewise recommended.

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