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ZERO POINT ENERGY CONVERSION FOR SELF-SUSTAINED GENERATION

P. RajaRajeswari, S. Sakthi, K. Bharathi, M. Sasikumar, and S. Srinivasan
Department of Electrical and Electronics Engineering, Jeppiaar Engineering College, Anna University, Chennai, Tamilnadu, India
E-Mail: praji81@yahoo.co.in

ABSTRACT

In this paper zero point energy conversion is proposed for self-sustained generator applications. Our entire universe balance is based on a magnetic energy lying in a minimum energy point called zero-point. By using an energy conversion machine magneto-gravitic link can be made zero-point energy by taking kinetic energy form i.e. rotational motion .Kinetic energy link is constructed using a special permanent magnet arrangement and it is independent of electricity . It uses perpetual motion and the kinetic energy is later converted by using a special type low speed axial flux alternator, comprising two rotating discs in-between which the coil is placed from which the power is drawn .

Keywords: zero point energy conversion (ZPEC), zero point energy (ZPE), magneto-graviticlink(MGL), axial fluxgenerator(AFG), finite element analysis(FEA), MATLAB.

INTRODUCTION

Electric energy generation is a process involving choosing perfect fuel source, deriving potential or kinetic energy converting it to electrical means by using complex energy conversion mechanism. This needs a power plant which involves high initial, operating, and maintenance cost. Though the method is proven to be sufficient in present situation, in future a replacement or additional source is posing mandatory. There comes the thought of how about getting free energy. Free energy idea may appear to be theoretical, but it's possible when the zero-point energy is used efficiently. The idea first took root from a German scientist Karl Schapeller (1875-1947). In 1930 he developed a device based on this free energy concept called Karl Schapeller Device, for generating electrical energy based on the Aethor Theory. From then on many scientists turned their concentration on this field of zero-point energy or perpetual motion. In recent scientist have used rare earth magnets to make permanent magnet generator, called perendev generator which runs on the basis of perpetual motion.

ZERO POINT ENERGY

Space is full of gravitons. Gravitons interact with each other and convert to color charges. Interaction between gravitons depends on their density in a given volume. Some gravitons with the same mass CPH convert to colour-charges and two electric fields form. These fields neutralize each other. However, positive color-charges repel each other, and the same action applies to the negative color-charges.

Therefore, when the intensity of color-charges grows, about each field (negative and positive fields) a magnetic field forms. This magnetic field maintains the electric field.

Magneto -Gravitic link

The meaning of magneto-gravitic link (MGL) operational principle is in alternate usage in closed cycle of gravitation force and magnetic forces of repelling attraction of PM and repeated alternation of gravitation force which acts on the rotor magnets when shielding the PM magnetic field by blinds-screens of permanent magnets magnetic fields where forces of PM magnetic repelling act on magnetic motor (MM) rotor when such magnetic shield between PM is absent. These are the magneto-gravitic links (MGL).

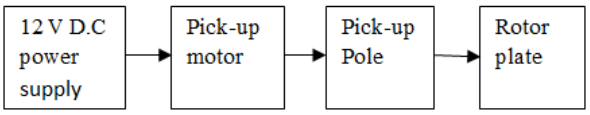


Figure-1. MGL block diagram.

This block diagram clearly shows the ZPEC using MGL, in a flow.12v D.C. running the pick-up motor, (coupled with the pick-up pole) which helps in bringing the rotor in synchronous operation.

Axial-flux permanent magnet generator

Axial flux machines are characterized by an axially directed air gap flux. Axial flux permanent magnet generated is formed by a rotor disc carrying magnets that produce an axial flux [8] and a stator disc containing the phase windings, single-sided, double-sided, torus, and multi-disc designs.

PROPOSED CLOSED LOOP

The block diagram of the proposed closed loop system is shown in Figure-2.

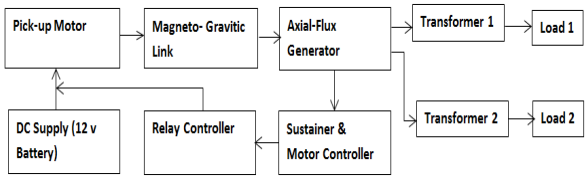


Figure-2. MGL block diagram.

The ZPEC is done using MGL as the main operational element. The air flow energy (ZPE) when enters the MGL, a magnetic oscillatory field is created. When the pick-up motor is started by the pick-up motor battery, this oscillatory motion is transformed into rotational energy by MGL.

The shaft coupling of the alternator and MGL results in motion of the alternator. The voltage delivered by the alternator is stepped-up by the potential transformer and which drives the load. Part of the alternator voltage is rectified by rectifier and fed into the voltage regulator circuit for regulated voltage. This voltage is supplied to the pick-up motor via controlled relay circuit for operating the procedure in closed loop.

Modelling of MGL and AFG

The magneto-gravitic link (MGL) operational principle is in alternate usage in closed cycle of gravitation force and magnetic forces of repelling attraction of PM and repeated alternation of gravitation force which acts on the rotor magnets when shielding the PM [1] magnetic field by blinds-screens of permanent magnets magnetic fields where forces of PM magnetic repelling act on magnetic motor (MM) rotor when such magnetic shield between PM is absent. Rotor plate is the rotating part of the MGL. Rotor plate is made of hylam sheet of 4mm thickness. The sheet is laminated on the rotor surface. This hylam sheet is a plywood based, having good tensile strength. The rotor plate is circular in shape with a center hole of 25mm for the shaft to pass through. The diameter of the plate is 400mm.The plate sits on the shaft horizontally as shown in Figure-3. The rotor plate carries poles on it. The poles are permanent ceramic magnets. Each magnet is 80mm in diameter with a hole in center

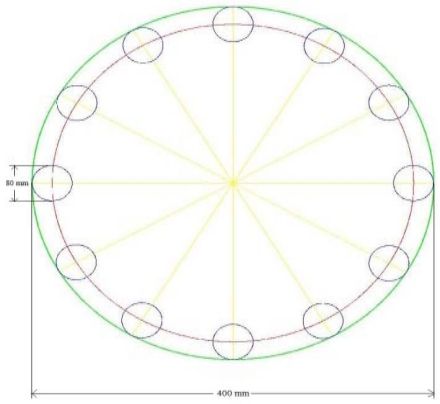
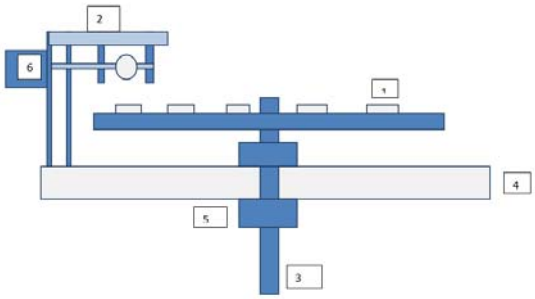


Figure-3. Model of arrangement of magnets in the MG disc.

There are totally 12 rotor poles. Each rotor pole is arranged towards the circumference of the rotor plate. The air-gap distance of 100mm is maintained between each rotor pole. This is shown in Figure-4. Like A.C. synchronous motor magnetic locking principle here MGL is synchronizes. When the pick-up poles implied force on the rotor pole gets nullified or stabilizes its easier for the MGL to run without the slip. This means that speed of the MGL's rotor and the pick-up getting locked and rotates in synchronous speed. This shows clearly that MGL works on 'magnetic locking' principle. The overall arrangement of Magneto-gravitic link with pick-up motor is shown in Figure-4.



1-Rotor pole; 2-pick-up pole; 3- shaft; 4- base; 5- bearing hub; 6- pick-up motor.

Figure-4. Magneto gravity link arrangement.

The axial flux (disc shape) permanent magnet machine is an attractive alternative to radial flux (cylindrical shape) machines in wind turbine applications. The axial flux configuration is amenable to the low-speed, high-torque operation of a direct drive wind energy system. Direct drive wind energy conversion tends to decrease the system size, weight, and noise, while increasing overall efficiency and reliability.

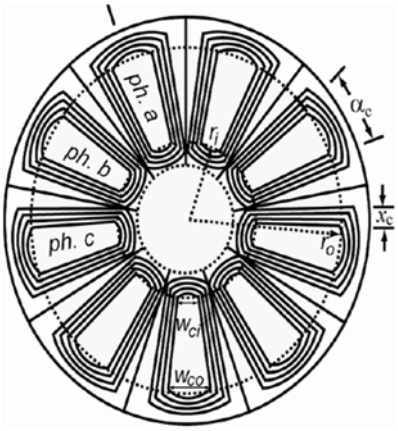


Figure-5. Arrangements of windings of AFG.

We use double sided stator arrangement in this AFG. The stator plates R1 and R2 are made of hylam sheets each of 250mm in diameter with a center shaft. On the surface the 12 ceramic magnets are placed without air gap as shown in the Figure. These magnets act as the stator poles.

Here we use a coreless arrangement of the rotor in order to induce maximum flux induction in between the plates. Here we use the same hylum sheet for the coreless solid. The rotor carries the stationary windings. The windings are Trapezoidal in shape enclosing the ceramic magnets field. Each coil consists of 300 turns. There are 3 phases R, Y, B are made in this generator. Each arranged at 120 degrees apart. This can be shown in the following Figure-5.

CHARACTERISTICS OF MGL

Field strength calculation of permanent magnets in pick - up pole and rotor

Magnets show repulsion or attraction force around itself. This area affected from the force of magnets called magnetic field [8]. Directions of magnetic field lines are showed below.

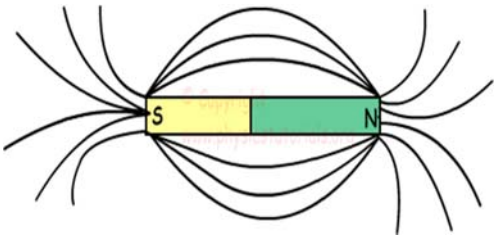


Figure-6. Field lines between 2 magnets.

- Never intersect
- If they are parallel we say that there is a regular magnetic field

Magnetic field is a vector quantity and showed with the letter B. Unit of B is Tesla. When we calculate magnetic field of a magnet we assume that there is a 1 unit of m at the point we want to find. We find the magnetic field with following formula

B=F/M (1)

We have the following condition prevailing between the pick-up pole magnet and rotor plate magnets.

Considering k.m/d*d is equal to 5 N/Amp.m the magnetic field produced by the m1 and m2 at point A. Here point A means rotor pole and pickup.

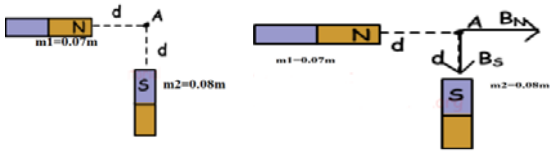


Figure-7. Field interaction between rotor and pick-up pole.

$$B_N = K\frac{8m}{d^2} = 8*K\frac{m}{d^2} = 8*5 = 40\frac{N}{Amp.m} \quad (2)$$

$$B_S = K\frac{7m}{d^2} = 7*K\frac{m}{d^2} = 7*5 = 35\frac{N}{Amp.m} \quad (3)$$

$$B_A = B_N + B_S \quad (4)$$

Vector addition

$$B_A = \sqrt{B_N^2 + B_S^2} = \sqrt{40^2 + 35^2} = \sqrt{1600 + 1225} \quad (5)$$

$$B_A = 53.15\frac{N}{Amp.m} \quad (6)$$

Field force betweenpermanent magnets inpick-up pole androtor

Effects of the two magnets to each other are inversely proportional to the square of distance between them and directly proportional to magnetic pole strengths of each magnet. These forces are equal in magnitudes and opposite in directions.F_1=-F_2

Where; k is the constant, m_1 and m_2 are the magnetic intensities of the poles and d is the distance between them.

Let's consider the following prevailing parameters,

Forces exerted by the N poles of the magnets to each other will be ($k=10^{-7}N.m^2/(Amp.m)^2$, when the rotor pole and pick-up pole are placed near.

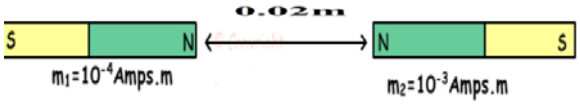


Figure-8. Force exerted between rotor and pick-up pole.

$$F = K\frac{m*m_2}{d^2}$$
$$= \frac{10^{-7}*10^{-4}*10^{-3}}{0.02^2 m}$$
$$= 2.5*10^{-11} \quad (7)$$

Two magnets are placed like given picture below. If the N pole of the magnet exerts F force on the N poles of the second magnet, find the net force exerted on the first magnet.

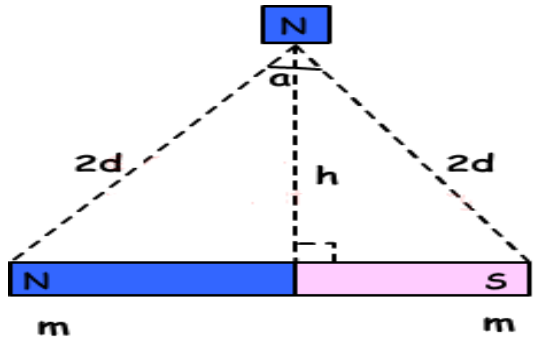


Figure-9. Vector representation of force exerted between magnets.

MAGNETIC FLUX OF PERMANENTMAGNETS IN MGL

Magnetic flux is the number of magnetic field lines passing through a surface placed in a magnetic field. We show magnetic flux with the Greek letter; Φ. We find it with following formula

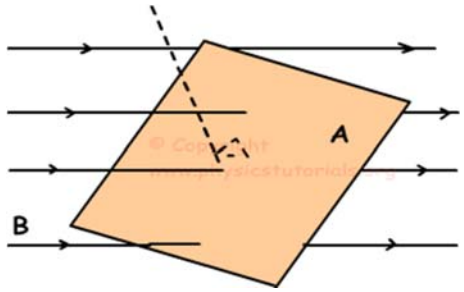


Figure-10. Magnetic flux lines of a permanent magnet.

$\Phi=B.A.\cos\Theta$ (8)

Where Φ is the magnetic flux and unit of Φ is Weber (Wb)
B is the magnetic field and unit of B is Tesla.
A is the area of the surface and unit of A is m^2.

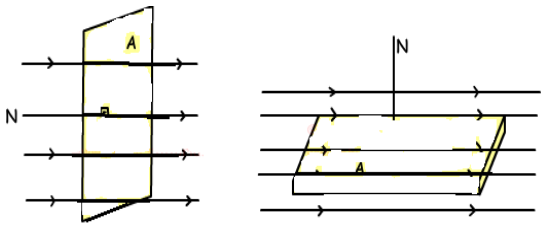


Figure-11. Magnetic field lines on vertical and horizontal plane.

In the first one, magnetic field lines are perpendicular to the surface, thus, since angle between normal of the surface and magnetic field lines 0 and cos0=1equation of magnetic flux becomes

$\Phi=B.A$(9)

In the second picture, since the angle between the normal of the system and magnetic field [8] lines is 90º and cos90º=0 equation of magnetic flux becomes

$\Phi=B.A.\cos90^o=B.A.0=0$ (10)

Magnetic permeability of the vacuum is denoted by;μ_o and has value ,

$\mu_o=4\pi.10^{-7}$Wb./Amps.m (11)

We find the permeability of the matter by following formula,

$\mu= B / H$ (12)

Relative permeability is the ratio of a specific medium permeability to the permeability of vacuum,

$\mu_r=\mu/\mu_o$ (13)

ALGORITHM

Starting of AFG for program

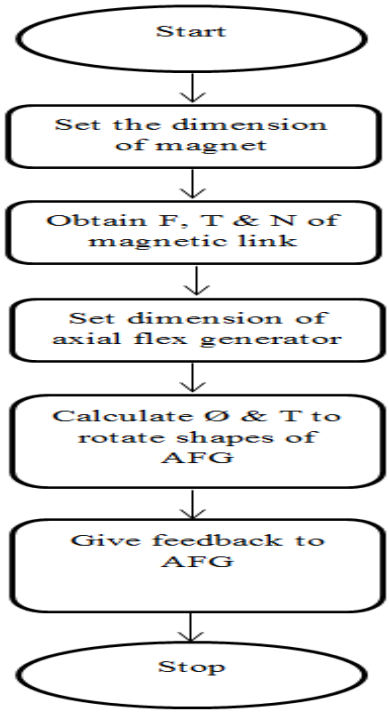


Figure-12. Algorithm of AFG starting.

Starting of MGL

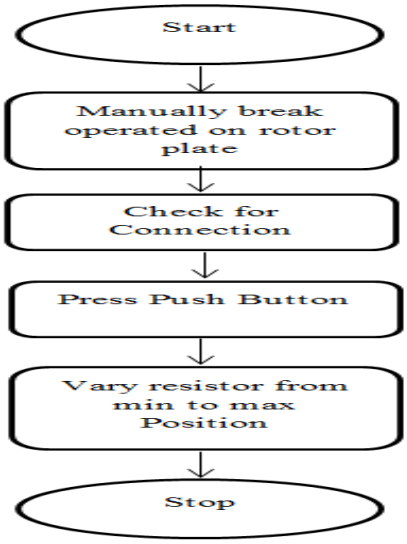


Figure-13. Algorithm of AFG starting.

While varying the resistor along the I adjust pin of LM338, we must note that there is no slip in pick-up pole of the MGL. If any slip is noticed bring the resistor value to minimum position, open the push switch. The pole is because improper loading of the pick-up motor. Repeat steps from 1 to 5.

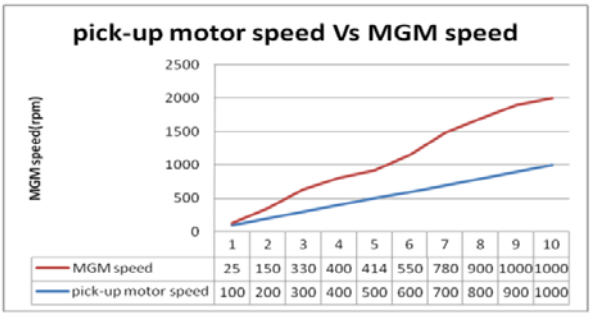


Figure-14. Pickup rotating speed vs supply resistance.

Stopping of MGL

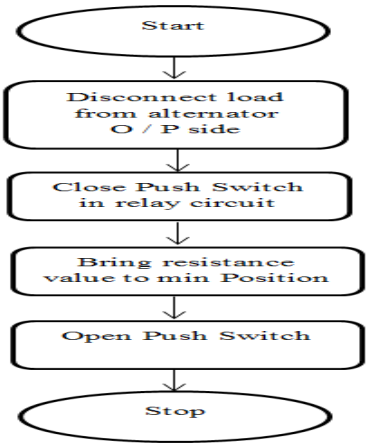


Figure-15. Stopping of MGL.

Magnetic Drag Effect

The field passage of ZPE is very sharp in magnet ends. When relating this to MGL, the field force gets increased very rapidly leading to fast movement of the rotor pole to its next position. When magnetic drag increases or decreases it has an effect on the speed - torque characteristics.

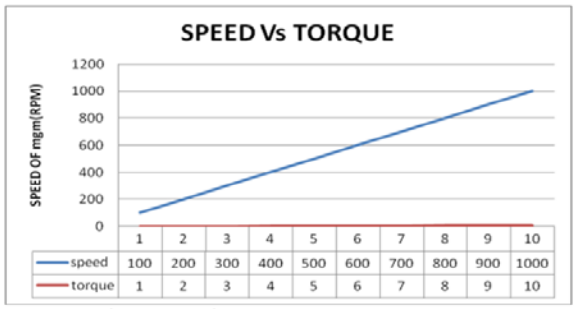


Figure-16. Speed vs torque.

Relation between Speed of Pick - Up pole andspeed ofrotor pole

This is very simple principle of the synchronism of MGL. Like A.C. synchronous motor magnetic locking principle here MGL is synchronizes. When the pick-up poles implied force on the rotor pole gets nullified or stabilizes its easier for the MGL to run without the slip. This means that speed of the MGL's rotor and the pick-up getting locked and rotates in synchronous speed. This shows clearly that MGL works on 'magnetic locking' principle.

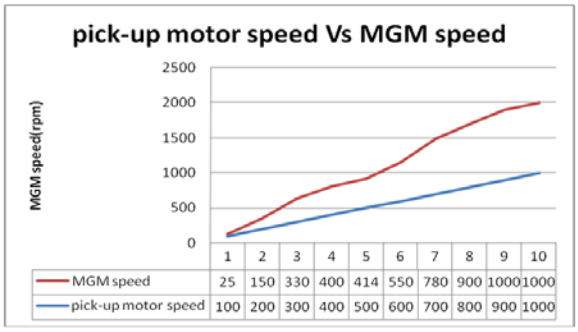


Figure-17. Pick-up motor vs MGL speed.

MAGNETIC FIELD IN AFG ON NO LOAD

The flux density determined by the analytical method compared with FEA (Field Element Analysis) results for both the innermost slice (smallest radius) and outermost slice (largest radius).From the Figure, it is clear that the analytic result closely matches the FEA computation [7]. It should also be noted that the flux density at the outer slice has a more pronounced peak than the inner radius, since the relative magnet width per pole pitch varies with radius. This feature is not captured using the mean radius approach of other analytic solutions.

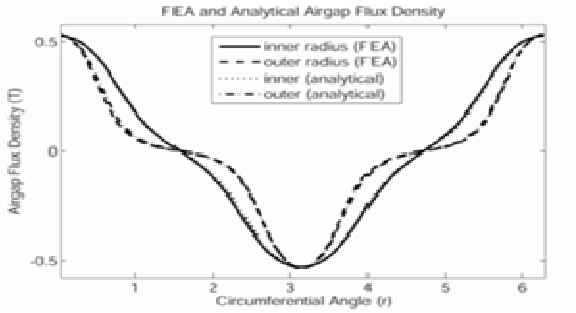


Figure-18. FEA and analytical air gap flux density curve (no load).

Magnetic field inAFGunderload

The figure shows peaks near the edge of the phase band and an average value of .004 Tesla. The armature reaction field is significantly smaller than the field produced by the permanent magnets [10]. This is a characteristic of the slot less, ironless core machine. Since the average magnitude of the armature reaction is insignificant compared to the permanent magnet field, it is reasonable to neglect armature reaction. The graphical representation of the AFG under loaded condition is as shown in the following graphical format.

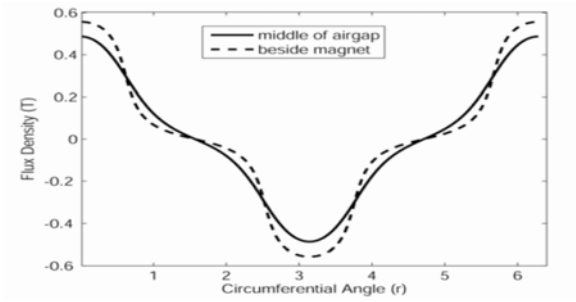


Figure-19.FEA and analytical air gap flux density curve (on load).

HARDWARE RESULTS AND DISCUSSIONS

To verify the results of the Proposed Zero point energy conversion, hardware prototype model was constructed and its picture is shown in the Figure-16.

The IC used in the motor controller in the hardware prototype is TL494 and the Controller Circuit is shown in the Figure-16.

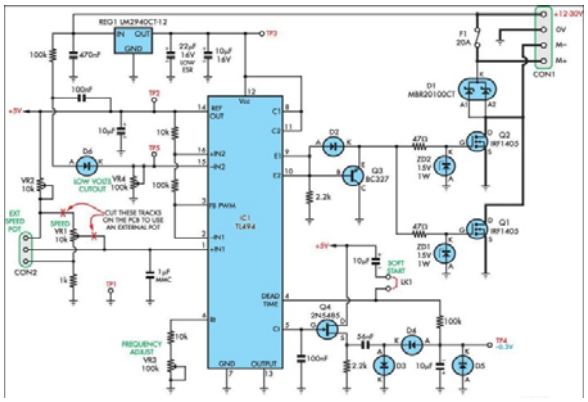


Figure-20. Motor speed controller.

Rotor plate is the rotating part of the MGL.

Figure-21. Magneto-gravitic link design.

Axial flux generator design

Figure-22. Axial flux generator design.

Figure-18 shows the actual construction of axial flux generator constructed design.

Working model

Figure-23. Hardware prototype.

The hardware model is shown in Figure-19.

EXPERIMENTAL RESULTS

On experimental analysis we found the following operating parameters in this ZPEC using MGL and AFG.

MGL

Table-1.MGL experimental analysis parameters.

Rpm	350
Force between rotor and pick-up pole	22.28 N
Torque produced in MGL	4.1202 Nm

AFG

Table-2.AFG experimental analysis parameters.

Rpm	300
Phase to phase voltage	11.7
Phase to neutral	7.6
Current	1
Boosted voltage	110

Magneto gravitic link calculations

Initial input to the pickup motor = 12 v battery

Dimensions of magnet

- Produced by AFG = 0.0125 Tesla
- Mass of magnet = 0
- Inner radius of magnet = 15 mm
- Outer radius of magnet = 35 mm
- Magnetic attraction distance of magnet used = 35 mm
- Reminisce field of magnet = 1.06
- Magnetic flux density = 0.0279 Tesla
- Energy produced = 309.6639 J/m^3

- Force = 3.4825e+007 N
- Power consumed by one magnet = 5.1611 Watt
- Radius of disc = 0.35 m
- Enter mass of magnet = 0.2 kg
- Torque produced on Shaft by MGL = 4.1202 Nm
- Speed of PICKUP motor used = 2000rpm
- No. of poles = 12
- Speed obtained in the shaft = 166.6667 rpm

Axial flux generator calculations

- Inner radius of magnet = 10 mm
- Outer radius of magnet = 20 mm
- Thickness of magnet = 10 mm
- Magnetic attraction distance of magnet used = 40 mm
- Remenance field of magnet = 1.06
- Magnetic flux density 15 kg
- Radius of disc = 0.18 m
- Minimum Torque required to rotate axial flux generator = 1.5892 (Nm)
- No. of turns per phase = 300
- Output voltage obtained = 9.4259 V
- Output power obtained from AFG = 26.1211 Watt
- Feedback Output given back to pick-up motor is 24 Watt and the remaining useful power is 2.1211Watt.

The useful power can be increased by increasing the grade of magnets used and by increasing the gauge of copper wire used in windings of AFG and also by increasing the speed of pickup motor used. The main advantage of this principle is the feedback given to the pickup motor is constant and independent of load.

CONCLUSIONS

This paper proposes a Zero Point Energy Conversion which is a closed cycle of electricity generation and capable of self-sustained with 12 V dc as initial input thereby finding its applications in domestic use of generating electricity. The Hardware Description was discussed in the paper for closed cycle of electricity production. This conversion of free vacuum energy into electrical energy opens gate to a new era of energy conversion. The ZPEC has not only emerged in electrical energy production, additionally this given us the key of self-sustenance in energy conversion. At present the ZPEC will be the best solution to replace the depleting fossil fuels this kind energy conversion mechanism will lead to the clean and green energy. In future if these kinds of energy conversion solutions are considered then we can rest assured high energy output at less complexity.

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