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ABSTRACT

Title of the invention: An apparatus, in the form of a generator with no moving parts for the direct conversion of magnetostatic energy of permanent magnets for the production of electricity.

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Date of Hungarian application: Marc 21, 1995.

Number of Hungarian application: P9500820

Date of Canadian application: 1996

The subject of the invention is the

MAGNETO-DYNAMIC GENERATOR,

which is an invention resulting from my scientific research.

The magneto-static energy of permanent magnets can be directly converted into electric power by means of synchronised control, without the use of moving parts and without environmental pollution.

The production of electric power takes place as a result of synchronised control, by drawing from the inexhaustible magnetic energy sources, without depleting the same. A self-magnetising electro magnetic field is applied to compensate for the loss of energy density of the inner energy source as a consequence of the control.

As a result electrical energy is gained from the output winding (T) of the apparatus.

6 Claims

2 Drawing Figures

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1. **Subject of the invention:** A scientifically researched and developed apparatus for the generation of electrical energy from the magnetostatic energy field of permanent magnets.

Specification: This equipment does not include any moving parts. By means of electronic control, magnetic fields that exist around permanent magnets and electromagnets are designed to release the static energy of these fields with conversion directly into electric power.

Background of the invention:

- Since the time when mankind first became familiar with natural stone magnets and
10. recognised the phenomenae of repulsion and attraction of these natural permanent magnets, the scientific world has been continually investigating the possibilities of harvesting this static energy and converting a directly into electricity.

These investigations have been encouraged by many well known facts. Laboratory measurements conducted in a vacuum have shown that a magnetic field energy density a hundred thousand times greater can be achieved than that of the field attainable in a normal environment.

Research has also proven that it is possible to freeze the energy density permanently into the material of manufactured permanent magnets with the help of up-to-date crystallization. technology.

20. The half-life period of the energy field of permanent magnets is 1111 years under normal conditions. Laboratory measurements indicate that by remagnetisation the density can be reset back to the original "reversible permeability" potential level.

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The energy stored in the magnet as well as field generated by the same remain unchanged as a result of the inner electromagnetic processes. The only condition to be met is that the processes should not cause a level of field strength intensity which could irreversibly change the operating point of the permanent magnet.

As a consequence of the above, the permanent magnet is seen as an energy source and must be considered inexhaustible.

Basic magnetic theory

30. It is a commonly known fact that the direction and path of magnetic lines of force of a permanent magnet can be influenced with the help of a ferromagnetic material, or another permanent magnet or an electromagnet placed into the magnetic field.

Electric current flow in a conductor in the form of a coil around an iron core will generate an electromagnetic field about that core.

Through scientific research and thorough investigation of the above phenomena, my father and I have discovered a way to demonstrate conclusively the feasibility of direct harvesting or magnetic energy hitherto for not possible.

"Magneto-dynamic free energy",

is an inexhaustible source of an environmentally-friendly energy for the future, replacing the

40. inefficient and environmentally damaging thermocaloric energy production of the present.

Summary of recent practices

According to the current practice, to achieve a change in polarity, the poles of an electro magnet are alternately subject to de - and remagnetisation, by means of a continuous sine wave - or zero crossing unit jump function current applied to the windings.

This repeated change of polarity taking place in the magnetic material created a continuous

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agitation within the molecular structure of the metal. This constant collapse and rebuilding of the poles in each direction, which is the source of magneto-dynamic energy, comes at a high price.

As a result of these periodical pole changes, more energy input is required than converted dynamic energy is released. According to the principle of the conservation of energy, the energy losses due to heating and magnetic reluctance of the material results in a significant decrease in energy released during this process.

Novelty

This new approach makes for a permanent magnet - PM - to oscillate or vibrate to and fro from a static state to a dynamic state continuously releasing magneto-dynamic energy in such a way that periodic pole changes and the inherent losses are voided.

As a consequence of my invention, nothing changes in the material of the permanent magnet during the release of magneto-dynamic energy. There are no traditional energy losses due to heating or magnetic reluctance.

60. Hence, the control of the magnetic lines of force will continuously and automatically remagnetise the permanent magnets over and over again simultaneously with full control of the multiple magnetic circle (to magnetise the magnet onto **BH_{max}** value).

Theory of operation:

The device constructed of - PM - permanent magnets and - T -, - Vt -, - Vcs - electromagnets is designed in such a way, that by controlling the magnetic flux biased by - PM - permanent magnets through controlled - Vt - electromagnets a change in the magnetic induction will take place. Thus the oscillation of the system will occur. Magnetic induction or magnetic flux originated by the permanent magnets will have the same direction as the electromagnetic induction produced due to control.

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70. Energy output fed back into the system and used for the control will add to the magnetic energy of the inner energy sources (that is of the - PM - permanent magnet) built into the system.

Since permanent magnets are considered inexhaustible energy sources, this device can be considered a controlled inexhaustible energy source. The system is comprised of two identical Magneto Dynamic units linked to one another.

The generators (later referred to as MDG) are linked via a complex interconnection between the windings and inner current sources within the device structure. This kind of bridging allows for full control so the permanent magnets can be utilized without losses or material property changes. This combination of shared (mutual) inductivities conforms to

80. the equation $L = L_1 + L_2 + K^2 + 2M$. Each unit consists of the following parts: - MH - magnetic bridge built of mild magnetic material and serving to conduct the flux of - PM - permanent magnets. The magnetic bridge incorporates electromagnetic winding needed for - Vt - control of the MDG, - T - energy output and - Vcs - interconnection. The electronic circuits used for the operation of the device are not considered part of the invention. -3 - control electronics consists of state of the art integrated circuits and field effect transistors. Power rectifiers - 7 -, - 8 -, are used to interconnect and act as feedback loops for the generators.

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The claims of the patent.

1. That each and every magneto-dynamic generator - MDG - characteristically, is able to realize the circuit potential of magneto-dynamic energy without the use of moving parts, to directly produce electricity by using controlled multiple magnetic circuits, designated in the drawings by - MH -, - Vt -, - Vcs -, - T -.
2. The device defined in claim No.1 characteristically contains at least two magnetic circuits, one of which incorporates a permanent magnet - PM - as a magnetic element.
3. The device defined in claim No.1 characteristically incorporates at least two elements comprising magnetic bridges.
4. The device defined in claims No.1 and 2. characteristically employs magnetic circuits incorporating inductances - Vt - for control, - T - for energy output and - Vcs - for feedback.
5. The device defined in claim No.1 characteristically by means of electronic control circuits - 3 - and synchronization of multiple magnetic circuits is capable of producing electrical energy without the use of moving parts.
6. The device defined in claim No.1 characteristically is able to compensate for losses of energy density and qualify as a self-magnetising circuit, created as a result of the effects of the control circuits.

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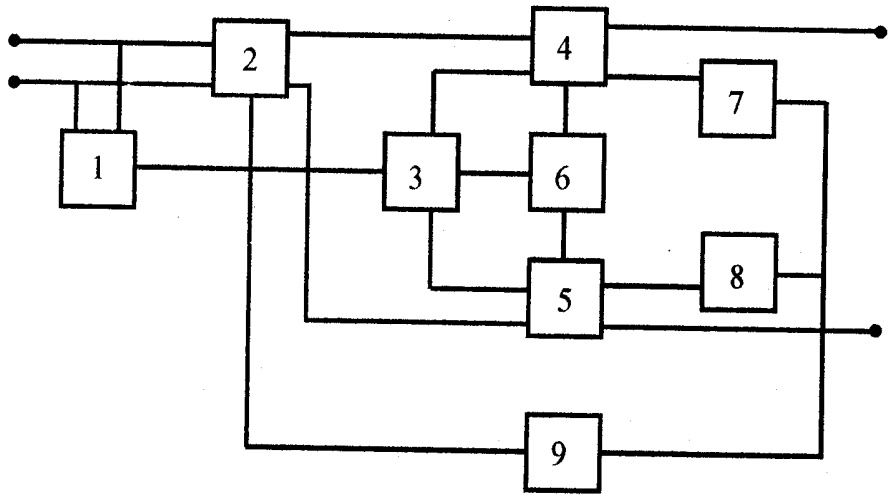


Fig. 1.

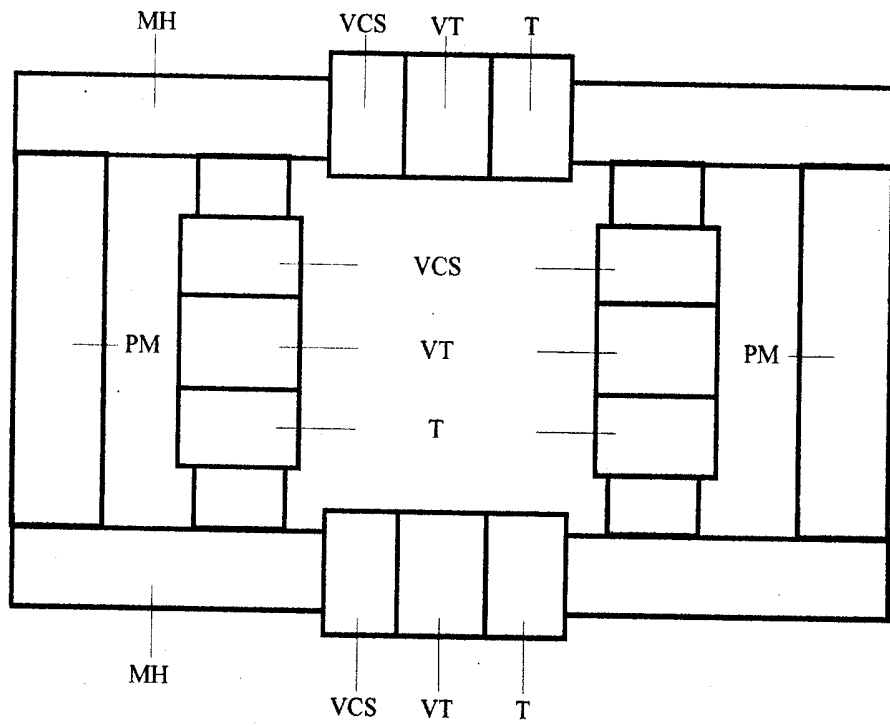


Fig. 2.

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