Introducing the Yildiz Motor

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Abstract- Unusual experimental results suggest that an ingenious assembly of permanent magnets might allow unfolding useful mechanical energy without recourse to conventional sources. A first attempt at introducing a possible theoretical background for this discovery is made.

I. INTRODUCTION

An embodiment of the invention of Mr. Muammer Yildiz, as partly described in the international patent nr. WO 2009/019001, was demonstrated at the Delft University of Technology on April 20, 2010. A video registration of the demo is available at

http://www.youtube.com/watch?v=mI3227d5Css

II. OBSERVATION OF UNUSUAL RESULTS

The demonstrated Yildiz motor presents quite peculiar characteristics. The stator of the machine is composed of 12 segments, 7 of them have been opened and offered to the audience for inspection after the machine had been in operation for about 30 minutes. It should be noticed that the audience, not the inventor, had requested to stop operation in order to proceed with the inspection of the internal parts.

All the exposed segments are made of aluminum or plastic, in which pieces of permanent magnet of different shapes have been inserted. The contents of some of the remaining 5 segments are not yet protected by patents, and it is up to a future investor to decide whether or not to do so.

After removing the 7 segments from the stator, it was possible to see and touch the exterior of the rotor inside in the machine. The rotor rig is made of aluminum, where also small magnets are fixed in holes. It is remarkable that, when the machine is in operation, this metallic cylinder spins at about 2000 rpm in the close proximity of the strong stator magnets without noticeable heat dissipation. Strange, because one would expect the induction and circulation of significant eddy currents in the aluminum. Isn't it nice that all the inspected segments and the rotor were not hot after opening the machine? Only a slight temperature increase has been perceived in the neighborhood of the mechanical bearings. In fact, in order to rotate the metallic cylinder at this speed, so in the proximity of the stationary magnets, a substantial amount of power would be required.

If it were the case of hiding a battery somewhere in the remaining closed parts, from an energetic point of view I would prefer to construct the rotor from materials other than metal.

A fan was connected at the extremity of the rotor. All together, we have seen then a ventilator in operation at the exterior of the machine, together with an "eddy current damper" at the interior. This is really an unusual combination that requires not just a little bit of energy to keep the cylinder spinning!

Furthermore, it should be noticed that the remaining closed segments in the stator are not symmetrically located around the rotor. In case of a hidden battery in these parts, it is also imperative to use semiconductor switches in quite efficient power electronic circuits, for the purpose of producing high-intensity pulsating currents through windings (again heat dissipation, which is unfavorable for hidden electronics). The pulsating currents are a necessary condition to create a pulsating magnetic field that would cross the air gap between stator and rotor, in this way allowing the rotor to maintain its rotation. While producing torque, a pulsating magnetic field would also induce strong eddy currents in the rotor, on top of the previously described "damper" effect, and so on... Really, even for a skilled engineer the implementation of all these sophisticated circuits does not make any sense.

True, the internal parts of the rotor have not been inspected. But, whatever its contents might be, it does not dismiss the argumentation above. That is because the rotor external rig is made of aluminum and encrusted with magnets. The spinning magnets in the

rig are expected to induce eddy currents in the aluminum parts of the stator, and the stationary magnets in the stator are expected to induce eddy currents in the rotor rig. Both sides, stator and rotor parts, were barely warm when opening the machine.

All together, although the embodiment of the invention has not yet been fully open for inspection, it seems to be evident from the achieved results that the invention working principles go beyond a conventional technology based on hidden batteries to supply the necessary energy to run the motor.

III. STORED MAGNETIC ENERGY

Firstly we should examine the possibility that the delivered mechanical energy could be taken from the magnetizing field stored by the permanent magnets. By considering a total weight of 24kg of all operating Neodymium magnets in the motor – that is 50% of the motor's weight – a total maximum stored magnetic energy can be calculated to be 0.25Wh, or 15 watts-minutes. Only the mechanical power that keeps the air flow through the tube placed in front of the propellers was already measured to be 10W. Therefore, if the motor runs longer than 2 minutes it is clear that the mechanical energy has not been transferred from the magnetizing energy stored by the magnets. And that was the case.

IV. GRAVITATIONAL ENERGY

A candidate explanation on how the Yildiz motor runs could come from mainstream physics based on the notorious statement $E=mc^2$. We could speculate that the energy is continuously supplied by reenergizing the spins of the elementary magnets via photon flux from gravitational fields. Otherwise stated, the self-sustained vibrations of the magnets in the motor would somehow resonate with gravitational fields.

In order to confirm this possibility, an extremely careful and sensitive experiment should uniquely demonstrate that the weight of the motor reduces during the running process, and that the weight does not change when the motor stops. But that means if the weight is reduced by 1g during the running process, then about 25000MWh need to be converted. Well, this is equivalent to supply uninterruptedly 2kW electricity to more than 1200 households for one full year!

Nevertheless, if the motor does not change weight during the experiment, there is another interesting possibility for a candidate energy source as forecast by Quantum field theory.

V. VACUUM ENERGY

Quantum field theory states that all fields – especially electromagnetic fields – have fluctuations. Otherwise stated, at any given moment their actual value varies randomly around a constant mean value. Even perfect vacuum at absolute zero temperature has fluctuating fields known as "vacuum fluctuations" or "zero-point fluctuations", of which the mean energy at every point in space corresponds to half the energy of a photon.

As a result of quantization, the vacuum tacitly has an extensively complex structure. All of the energetic properties that a particle may have are present at every point in space, like a chaotic "sea of activity". On average, all these superimposed properties cancel out, and the vacuum is, on balance, "empty". However, random vacuum energy may be displaced to coherent patterns, with observable results that can be directly measured by experiments. The *Casimir forces* are an example where zero-point fluctuations interact with parallel metal surfaces, with separation distances at micron length scales, and deliver work.

Actually any physical object interacts with the chaotic vacuum fields and produces some coherent interaction. In that case, we could speculate that, due to the ingenious construction of stationary and vibrating permanent magnets, the Yildiz motor might have the property of changing the randomness of quantum fluctuations into useful energy, and allows therefore unfolding energy from the surrounding space without recourse to other sources. A fundamental assumption is that enough energy is displaced from the vacuum fluctuations to maintain the presence of a strong circular (in general, spiral) magnetic field around the rotor.

The magnitude of the vacuum energy is beyond imagination, but physicists try to give some idea of it when remarking that the energy in a single cubic meter of space would be enough to boil all the oceans of the world.

VI. CONCLUSION

Clearly, we need more experiments to decide which theory has the potential to help understanding and improving the Yildiz motor. Still, don't you agree that, although the apparatus has not yet been fully open for inspection, the demonstration in Delft has shown a few points that do deserve some attention?

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Modeling the Yildiz Motor

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Abstract – The assembly of the Yildiz motor consists essentially of permanent magnets, plastic and aluminum. However, experiments confirm that, without being connected to any other conventional source of energy (such as batteries, radioactivity, etc.), the motor is able to continually develop torque on a spinning axis, and can be operated by this way as a prime mover. In this short article a quite simple qualitative model, which attempts to combine mainstream theories, is proposed aiming at characterizing the behavior of the apparatus.

I. Introduction

Some peculiarities of the Yildiz motor have been described in a previous article (given in annex). Recent demonstrations (www.bsmhturk.com), this time with open assemblage for inspection, confirm that the device is made of permanent magnets, plastic and aluminum. It is remarkable that the primary source of energy is not straightforward to recognize. Moreover, the motor is able to maintain the rotor spinning and to deliver mechanical energy without perceivable circulation of electric currents through the aluminum parts.

In the following, a first attempt is made to explain these alleged anomalies in view of existing, although not yet generally accepted, theories in physics.

In Section 2 considerations about electromagnetic singularities are discussed in order to explore the possibility of unfolding energy from space. Then, the energy conversion mechanism inside the machine is elaborated. Subsequently, the origin of mechanical torque acting on the motor axis is suggested in Section 3. As a consequence, the full mechanism of energy conversion could be explained. Finally, conclusions are drawn in Section 4.

II. Electromagnetic singularities

In mainstream physics the space is not considered to be empty at all [1]. It is assumed that there are mass-free particles (like photons) everywhere, in a huge range of wave frequencies. These particles offer a chaotically diffuse form of energy, considered to be ubiquitously present in the universe as a “seething black sea”. The origin of chaotic space energy is often considered to be so called ZPF (zero point fluctuations) or vacuum fluctuations.

Another interesting possibility forecasted by Quantum field theory is the existence of *magnetic monopoles* [2] (i.e. isolated magnetic poles, such as a north pole in the absence of a south pole). Indeed, a convincing reason why isolated magnetic poles should *not* exist has never been given. Although experimental indirect evidence of monopoles has already been claimed [3], so far direct searches for particles that carry isolated poles have been unsuccessful.

There is also a peculiar communication in the literature, more than three decades ago, based on experimental measurements of the magnetic field surrounding the extremities of permanent magnets [4]. Contrary to usual expectations, two types of helicoidal magnetic field lines were present under each pole. The registered spatial field distribution for the magnetic induction is similar to double vortex structures. This study has not grown since then, even though there are enough experimental results in [4] that could be easily reproduced. The measured double vortex

might be seen as a result of electromagnetic singularities, indirectly equivalent to separated magnetic monopoles in space.

Concerning the working principle of the Yildiz motor, a fundamental assumption of the model proposed in this paper is that the ingenious geometric assemblage of magnets inside the device induces an environment that favors the emergence of separated helicoidal magnetic vortices like in [4]. It is then postulated that one type of vortex is predominant, yielding singularities that virtually behave like monopoles in the gaps between rotor and stator. Due to the resulting helicoidal field lines, uncommon curly patterns can be observed through a magnetic viewing paper placed in front of the transversal faces of the rotor.

III. Application as prime mover

Assuming that the permanent magnet-covered rotor is immersed in magnetic field lines having helicoidal loops, there a mechanical torque will appear on the longitudinal axis (because of the circular component of the field lines), which will cause the rotor to spin. As a consequence, as long as the vortex-like shape of the magnetic field is preserved (by some source of energy), it is possible to take mechanical energy from the rotating axis.

The mechanism that allows maintaining a helicoidal magnetic field in between rotor and stator is a direct consequence of particle jigging in permanent magnets. Inside magnetic materials, charged particles (electrons) jitter synchronously without collision. This process is maintained by electrons receiving energy from photons in space, and emitting photons back to space [5], by this way building the magnetic field (a coherent pattern of quantum fluctuations) around the magnets. Normally it is an energy exchange process with no net energy transfer on average. However, when mechanical energy is taken from the spinning axis, it is assumed that, for a certain range of output power, the ingenious construction of magnets allows displacing enough energy from the quantum fluctuations through the internal particle jigging to keep the helicoidal shape of the magnetic field around the rotor.

Otherwise stated, space is the primary source of energy in the Yildiz motor, since the quantum fluctuations are what maintains the magnetic field vortices, in spite of the energy transfer through the spinning rotor.

Since the rotor rotates immersed in a helicoidal magnetic field, there is no voltage induction in the aluminum parts; therefore also no eddy currents will be induced. This would explain why neither heat nor damping torque is generated.

IV. Conclusions

A first attempt is made to explain the behavior of the Yildiz motor in view of existing, though controversial, theories. The model is far from being satisfactory, since not yet enough detailed measurements have been performed to verify the propositions. However, the discussed ideas open the way for model confirmation or falsification on the basis of future experiments.

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Eindhoven, December 5, 2012

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