

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=mI3227d5C5s>

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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