

for one second. Thereby, on the Earth this light bulb will be on only for an instant. But if the same capacitor with light bulb is placed in rocket and dispersed around the Earth at the velocity, closed to velocity of light, time on the board of rocket will be so slowed that the light bulb on rocket will be glowing infinitely long for an observer from the Earth. It means, that in any case it is the same energy quantity, but in one case it's action is sprawling for a second, and in another one it is sprawling for eternity! It is possible to say, that in my system I have created the condition corresponding to this hypothetical rocket".

The system for accumulation of electric energy could be charged by ordinary wall plug 220 VAC. Time period of charging is different and depends on the certain scheme of the system. By the way, sea electric slopes are the certain natural analogues of such capacitor. Some elements of internal device of these sea creations reminds the "pump" elements for placing of electric energy into "temporal jar".

Finally, the third Gaponov's invention is the system for transmitting of energy without wires. As well as in two previous cases, there is an experimental device. Anatoly Gaponov speaks that he has succeeded in getting the essence of experiments for transmitting of energy, which were conducted by Tesla.

It is clear, that the main advantage of this method is an absence of wires and losses of electric energy. The electricity could be transmitted directly into any point, where receiving equipment placed, let say from Kaluga to Sahara. However, this is not so interesting for anybody, since for the present day Anatoly Gaponov's inventions don't have demand.

" The first system was created twenty years ago", - says Mr. Gaponov. - "Now I am fifty five, but things have not budged an inch". He adds dreamily: "Eh, if only I had a laboratory and some money..."

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## Gritskevitch's Hydro-Magnetic Dynamo

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*Editorial: The article presents construction and operation of Oleg V. Gritskevitch's hydro-magnetic dynamo, which is an example of very powerful new energy system. The prototype in Armenia has been produced over 1500 KWtts power during several years.*

***The author was born on 14 August 1936 and grew up in Vladivostok, Russia. He is married and has a son Boris. Gritskevitch is a physicist by education. He worked in the Far - East branch of the USSR Academy of Sciences. Since 1985 he has been working independently as an inventor. He has more than 70 patents on inventions ranging from household engineering up to high technologies, which he has been trying to apply in our country and met big difficulties. After numerous attempts to receive the patents the author was convinced that outflow of the information occurred. Therefore he has received the state certificates as on know-how (on a French way of patenting), for all his inventions.***

### Introduction

During the Institute for New Energy 1999 Symposium, I lectured on my hydro-magnetic dynamo. This paper is my attempt to explain the construction and operation of my dynamo.

To fool investigators of my secrets, I have an occasion provided misleading information. For example, the drawing accompanying the Russian patent referenced below shows a cylinder across the toroid to fool readers. The real dynamo only has the toroid without the cylinder. Even its name "hydro-magnetic dynamo" is somewhat deliberately misleading.

I have some familiarity with the new energy field. Nearly all purported new energy devices are fairly small electrical generators. The dynamo may be the only new electrical generator which most nearly meets all the requirements of an ideal large-scaled electrical generator. My dynamo really is the single most valuable invention the world has ever known.

Alexander V. Frolov of St. Petersburg recommended me to contact with Dr. Patrick Bailey, Institute for New Energy since Pat has lots of contacts who could possibly help me with patenting my invention of a new source of energy in USA.

I conducted the work on the theory and creation of the electrostatic generator-converter «Hydro-magnetic dynamo» about 20 years. (See dynamo history below.) The first primitive equipment was created when I worked in Academy of Sciences. During that time various changes were introduced in the generator and in the theory of its work. It is now possible to manufacture, install, and apply it in industry.

For the first time I made the public report on this work in 1991 on a symposium in Volgodonsk city. The report received the positive replies and reviews of the experts of a nuclear industry in USSR. The same year I was accepted in International Nuclear Society. In these years I offered development of this technology to different state bodies and private enterprises. But there was the only answer: "It is very interesting and perspective project, but there is no money for it".

At the end of 80 years I tried to transfer this technology in USA through the embassy in Moscow. The former ambassador of USSR the Dr. J. Matlock knows about it. He wanted to meet me, but in that time there were forces which have not given to carry out my plans. Thus, I came to the conclusion to look out other possible investors. I am ready to consider any offers on cooperation: joint patenting, sale of know-how(s), creation of joint venture etc. I have 70 Russian patents including the following:

- Engine for marine courts and torpedoes without any mechanics.
- Reactors-converters of chemical elements.
- Rocket – torpedo without any mechanics.
- Weapon systems without firing pin.
- Metal powders made electrodes.
- Oil separation method. Separation of any fraction (liquid, rigid).
- Electrostatic disintegrator.
- Rigid elements based plasmatron. New heat sources.
- Steam boiler based on Runk effect.
- New truck and pin for caterpillar machines.
- Refrigerators based on electrohydraulic effect.
- Springless shock absorber.
- Energy roof for apartment houses and other patents.

### **Dynamo History**

The beginning for this project came as a conclusion from one popular Russian magazine article (Tehnika Molodiozhi (Youth's Technique), 1972, #8, August issue, by A. Kaldamasov, entitled "Sharovaya Molniya v Zhidkosti" (Spheroidal Lightning in a Liquid)). This article came to the attention of Michail Razovsky and me in 1974. My group of volunteers and enthusiasts was looking for a new source of energy. This article served as a start-up point for the understanding of chemical-physical processes occurring in water. In 1976-1978, in the Vladivostok city hospital, in the radiological lab, me and others (Vladilen Bulgakov, radiology physician, and Michail Razovsky, theoretician in the plasma physics field) spent one year assembling a device, which was supposed to separate water into oxygen and hydrogen more efficiently. During the experiments, instead of expected results, it produced electricity very efficiently! The input power during the experiment was 800 watt water pump. The output was 1400 watts. This device was assembled using plastic pipes connected with hoses, where the water was circulating in a loop. Further this led to the idea of creating the second device as generator-toroid.

The second generator was assembled in the workshop of the Ocean Research Institute (Director Academician Viktor Ilichov) in Vladivostok, and it was transported in the summer of 1990 to the testing station of the Ministry of Electronics Industry in Vladivostok. This lab was well-equipped with all necessary sets of instruments. At the same time patent papers were filed in the USSR State Committee of Inventions. In the spring of 1991 the State Commission, led by Yuri Lebedev, chairman of the Innovation Council at the Chairman of the Russian Federation Council of Ministers arrived in

Vladivostok. This commission arrived to the town for two reasons: To recommend a financial request for manufacturing the dynamo; and to classify this energy source as a "Discovery" (document #14-451).

After the next change in Russian government the financing for the project was terminated. The first article on the dynamo was published in the Russian magazine ("Tehnika Molodyozhi", 1990, #3, March issue, Page 17, entitled: "Idyei Innovatora" (Innovator's Ideas)).

Several Armenian physicists, after reading the aforementioned March 1990 article, sent me a letter requesting to meet with me in Vladivostok for negotiations about the dynamo. They arrived in March 1991 and made observations of the second generator, which was in working condition at that time. I flew to Armenia, and the work on the third generator started at the end of 1991. It was completed at the end of 1992. It was working and was producing energy until January of 1997, when it was destroyed during the war. Some people were also killed and other people further moved to USA. This version of dynamo created an output averaged 6,800 amperes at 220 volts DC. Its input power was only approximately 1% of the output power.

Then I was an invited speaker of the Meeting of the Alternative Energy Institute (Dr. Hal Fox) in Salt Lake City, August 1999. I want to note that the official announcement about my speech had several mistakes (for example, the name of Armenia was changed to Romania).

### **Dynamo Theory**

My hydro-magnetic dynamo is a large-scaled emission-free electrical generator, which does not require external fueling. The dynamo is capable to power larger transportation vehicles such as buses, trucks, ships, locomotives, and airplanes. Doubt remains about making dynamos compact enough to power automobiles.

While three experimental prototypes have been built with Russian and Armenian expertise and equipment, a fourth demonstration prototype needs to be built with more modern Western engineering expertise and equipment to verify dynamo performance claims and to further explore the dynamo's potential capabilities. Performance claims are as follows: Dynamos are scaleable from 100 kilowatts to 1,000 megawatts. One 1000-megawatt dynamo is about the size of a two-car garage. For comparison, Hoover Dam's 17 generators have a total capacity of 2,000 megawatts. A dynamo can reliably run continuously for 25 years or more with little or no maintenance, no external fuel source, and no pollution. If a dynamo's output is 1,000,000 watts, its total input power is approximately 10,000 watts. So therefore the dynamo's energy efficiency is about 10,000%.

The source of the dynamo's huge electrical output is a nuclear reaction, which is not generally known to mainstream science. However, it is known that the dynamo produces alpha particles, which are helium

nuclei, made from fused deuterium, an isotope of hydrogen with one proton and one neutron. The electrons missing from the helium nuclei are what seem to provide a copious “sink” of electricity, and which happens to be the secret to the dynamo's ability to generate an exceptionally large amount of electricity. It is also known that the dynamo uses high-density charge clusters. High-density charge clusters are thought by some theorists to be the basis of plasma-injected transmutation of elements and also neutralization of radioactive materials. Unlike hot fusion and fission reactors, the dynamo does not accumulate any radioactive components.

**The result of the dynamo's processes is conversion of electrostatic fields to direct current. I should note, that the clear understanding of the terms like “Coulomb's conversion” and also “liquid Van de Graaf generator” is very important.**

Schematically, the dynamo is an electrostatic transformer, or in other words an electrostatic voltage multiplier. One version of the dynamo is designed, which uses lasers for start. There were three dynamo prototypes built. The first two small experimental prototypes were built in Vladivostok, Russia. The third and last prototype continuously generated electricity, except when turned off to incorporate improvements, from 1992 to January 1997 in Armenia.

It was mentioned above that the Armenian prototype generated a direct current of 6,800 amperes at 220 volts that is about 1.5 megawatts. Minimum power output has been 500,000 watts, and maximum power output has been 2,500,000 watts during winter experiments due to better cooling. The Armenian prototype dynamo's toroid weighed 900 kilograms and had a diameter of approximately 2 meters. Cooling water is circulated through copper pipes wrapped around the toroid. The heat is expelled from the cooling water with a heat exchanger. The working temperature was typically 36 degrees.

After a dynamo is assembled, the water is literally “jump-started” (by discharging a large bank of capacitors) to moving around the toroid. The start impulse pressure is as high as 400 atmospheres. The dynamo's controls are temporarily set to generating enough of a modest amount of electricity to sustain itself, possibly even while being transported from the factory to the place of its future operation. The control circuits are simple as only sensors and a control computer are used. We do not need any technical maintenance personnel.

For the Armenian prototype dynamo, two 10-Farad capacitor batteries were used to provide the initial water motion (acceleration and excitation of water). The capacitors were 20 kilograms each, with diameters of 50 centimeters, and were supplied from Russian military radar stations. Using a total of 20,000 Joules, 100,000 Volts with 0.05 Amperes of current were applied to the Armenian dynamo for 3 - 5 minutes to ionize and polarize

the water, which then started the generation of electricity.

The reason for the very high voltage provided by the large Russian radar capacitors, when starting the generator, appears to be to polarize the crystals of barium titanate. One comparison is with the electronic ignition on a gas stove. Once the barium titanate crystals are polarized, the generator is running.

After these capacitors had been used to “jump-start” the Armenian prototype dynamo, a battery of buffer batteries sustained continuous operation when water motion and ionizing began. This battery bank contained 8 powerful 12-volt, 150-ampere lead batteries. The Armenian dynamo's sustaining input power was 14,400 watts. The nominal maximum output power was about 1,500,000 watts. Once, the output current was accidentally increased to 40,000 amperes for almost a minute. Fortunately, the power was reduced to a safe level before the water started to boil. Internal coils (windings) provide the control of water velocity and therefore control dynamo power. The faster the water is moving, the more electricity the dynamo generates. Once the water stops circulating around the toroid, the dynamo must be “jump-started” again to a minimum power level before it can sustain its electricity generation with its own output power.

The following is a condensed summary, with some editing and additional commentary, of the “Description” of the dynamo's Russian patent IPC H 02 K 44/00 “Method of deriving of electrical energy and realization of Gritskevich's MHD-generator “.

The dynamo is a sealed polystyrene toroid filled with ultra-pure distilled water with heavy water (deuterium oxide) added. Movement of water inside the closed loop and use of unique properties of water as a polar liquid cause a release of electrical energy as an outcome of a rupture of hydrogen connections. Additional electrical energy is drawn from nuclear reactions and micro-cavity processes. The liquid is ionized, polarized, and moving around the toroid at start-up time by a running magnetic field with the help of stimulating electromagnetic windings.

Electrostatic generator-transformer “Hydro-magnetic dynamo” (GT HMD) works due to the process of amplification and maintenance of stationary (oscillating in particular) electromagnetic field by hydrodynamic movements of the conductive medium. The stator (i.e. the toroid) is made of materials with a high dielectric permittivity. Liquid rotor is a recombined water (“pure” water with high-molecular compounds), which moves due to the high-voltage discharges and running electromagnetic field.

The main processes in GT HMD are:

- ***A principle of Van-der-Graaf's electrostatic generator, where the solid insulating tape was changed to the liquid one.***

- ***A perpetual washout of the surface electrons from the spacer layer takes place;***
- ***The Colomb's transformations take place;***
- ***A single-turn low-frequency generator works as a coaxial turn with 4 resonance points and energy carrying substance inside it that has very high resonance properties;***
- ***The electrostatic breakdowns of cavitation-vacuum structures in water take place.***

The polar liquid (pure water) consists of dipoles only, i.e. strictly oriented charged molecules. During the interaction of ionized pure water with the layer BaTiO<sub>3</sub> the electrostatic field of above 10 millions volts/cm is formed. During this process the breakdown of physical vacuum takes place.

Electrostatic field coupled with action of BaTiO<sub>3</sub> layer (if we apply electrical field to BaTiO<sub>3</sub>, then this layer creates the sound vibrations of about 25000 Hz, this vibrations help to destroy the molecules of water) facilitate to the further destruction of molecular-atomic structures of water. And due to the perpetual electrostatic discharges the breakdowns in cavitation-vacuum structures occur and the reaction of cold nuclear fusion proceeds. With this fusion the energy of 500kJ/mole is liberated in vacuum and the energy of 6kJ/mole is liberated in water. Thus, new hydrogen bindings form in vacuum with the energy liberation of about 20 kJ/mole. Due to this process the acceleration of ionization of polar liquid takes place. In addition the constant "washing out" of the incomplete electron bindings from the layer of barium titanate occur, i. e. free electrons form. Due to this process the polar liquid transforms to the ordered flow of electrons and negative ions, which can be called very simply as an ionic-electric current.

Works on creation of the experimental generator were began in September 1991 in Armenia and came to an end in March 1992. The active working weight of the prototype of dynamo (torus + water) was about 900 kg. The diameter of torus was about 2 meters. Torus was made of the impact-resistance optic polystyrol. This torus consisted of two halves, which were turned on the merry-go-round machine.

The monocrystalline barium titanate BaTiO<sub>3</sub> was sprayed on the internal surface of torus, its dielectric permittivity was 6000. The thickness of the layer was about 1 micron. The water was purified to the specific resistance of 18 000 000 Ohm/cm.

*(Editor's: Let's remind to the reader that it is exactly a distilled water is a good dielectric with permittivity of about 81. The usual water is not a dielectric).*

As we mentioned above, to start the dynamo 2 condenser jars of 10 Farad each were used. The energy of a starting battery constituted 20000 Joules, the voltage was 100,000 Volts and the current was 0.05 Ampere to provide the initial movement of water (acceleration and disturbance).

*(Editor's: Let's note that such a small current can be explained by the good dielectric properties of water. Thus, it provides a high effectiveness of the system).*

The electrodes were made of metal tubes with diameter of about 5 mm. The dynamo "ignites" by these electrodes. 32 electrodes were installed uniformly along the torus of generator.

The cooling system of the body of generator was a closed circuit with circulatory purified water. The copper tubes were used in this system, which were covered with glass insulation. They also were the turns of load winding. The temperature of toroid was maintained not higher than 50 Celsius degrees.

An average output power with the load was 220 volts x 6,800 ampere = 1,490 kWatt. The current was direct. Periodically the power increased up to 2,500 kWatt, when the sufficient cooling of generator was provided.

The additional power was received from four resonance windings. This alternating current after the rectifier was used to charge the back-up battery. Thus, the total output power constituted more than 1.500.000 Watt.

The low-frequency voltage was obtained from the load windings and the direct current was obtained from the stabilization chamber.

Let's note that the high-voltage discharges of 32 electrodes ionize the partially pre-ionized water further. By means of the stimulation windings, a running magnetic field is created which moves the water in one direction inside the toroid. An electromotive force is created by the electromagnetic induction in a separate set of windings.

As we already mentioned, during the movement of the water stream, free electrons are created, and an additional energy gets emitted because of the water's friction (viscosity) against the layer coated on the inside surface of the toroid, because of electrostatic breakdowns of cavity-vacuum structures, and because of the ongoing nuclear reaction.

***If a dynamo's output is 1,000,000 watts, its total input power is approximately 10,000 watts. So therefore the dynamo's energy efficiency is about 10,000%.***

In addition to the barium titanate deposited on the teflon-coated inner surface of the polystyrene toroid, the water itself also contains tiny barium titanate crystals which is suspended in the water. Ultrasound at 25,000 cycles per second is propagated through the water to form micro-bubbles on the surfaces of the suspended barium titanate crystals. Again due to the barium titanate's piezoelectric action, very high electrostatic fields are also developed within the micro-bubbles at the surface of the crystals. The electrons from the nuclear reaction are added to the electrons generated at the toroid's interior surface. The total amount of mono-

crystalline barium titanate in the Armenian dynamo was nearly 1000 grams.

### Dynamo Economics

The dynamo's production cost is estimated at \$500 per kilowatt which is competitive to nuclear power's capital costs of \$5,000 per kilowatt, windmill capital costs of \$4,000 per kilowatt, etc. A well-run nuclear power plant can generate power for 1.5 cents per kilowatt-hour, coal 1.8 cents, natural gas 3.4 cents, and oil 4.1 cents, on the average. The dynamo's operating cost would be approximately 0.1 cent per kilowatt-hour with no external fuel needed and without pollution.

Dynamos could replace all nuclear power plants, solar installations, wood-burning furnaces, hydro-electric

dams, windmills, fossil-fueled power plants, etc. Satellites, locomotives, heavy trucks, airplanes, and ships are obvious transportation applications.

A recent IEEE Spectrum article stated that world demands for electricity increases approximately on 500 megawatts every day. To put this in perspective, the equivalent of another Hoover Dam would have to be built every four days to keep up with world electricity increased demand. Or, a dynamo manufacturing company would have to build another 500-megawatt dynamo every single day to keep up with world electricity increased demand in addition to replace all existing generators fueled by hydro, nuclear, and fossil fuels.

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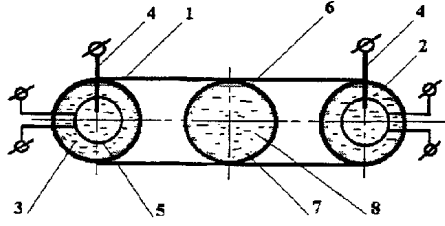
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ОСУЩЕСТВЛЕНИЯ



(57) Abstract: The invention is directed at increasing output, reliability and environmental safety of MHD generators as well as at simplifying the design of said generators. The inventive method for the production of energy comprises the following steps: a polar liquid (8) is circulated in a predetermined direction along a hermetically sealed toroidal channel (1) by means of a travelling magnetic field, and electric power is collected by means of electromagnetic winding. The liquid is ionized at least at the stage of launching, by means of electrodes (4), for example. The internal walls (2) of the channel have a dielectric constant which is higher than the dielectric constant of said liquid.

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