

# Some Experimental News



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In 2002 we have developed several R&D projects. Mainly we have investigated topics related with fuel-less power generation, reaction-less propulsion and longitudinal wave generation. Discussion with our readers on the topics can be useful for us and it is the goal of this publication.

## **Vortex Drive**

This principle in general is known as method of transformation of rotational motion of mass (working body) into translation motion of the system. Experimental unit was designed in our laboratory. After testing of the system it was confirmed that it is possible to create unidirectional thrust (propulsion force) by means of vortex principle. Our company Faraday Lab Ltd filled Russian Federation patent claim #2002128658 of October 25, 2002. It describes METHOD AND DEVICE TO CREATE PROPULSION FORCE BY MEANS OF TRANSFORMATION OF ROTATIONAL MOTION INTO TRANSLATIONAL MOTION. In science and engineering history many different methods and devices for propulsion force generation were proposed. These devices principally differ from reactive systems since they do not require reactive throwing of mass outside of the body of the device. In 1926 G. Shiferstain received Russian Patent #10467 for a method where oscillating mass was used. In 1934 M. Kolmakov (Russian patent claim #45781) described transport without cohesion with road because it moves due to inertial forces. In 1961 S. Kuptsov and K. Karpuhin received patent #151574 for self-propelled system, which had eccentrics making the centrifugal force to get propulsion.

Sure, the development of these technologies is impossible without reliable theoretical basis. Therefore, the theoretical basis of these methods continues nowadays and it requires the analysis of physical sense of the phenomenon of inertia. Development of the notion of inertial mass is presented in modern theories as a

result of interaction with physical vacuum, which is a special medium. The example of this theory is the method, which is described in USA patent # 5280864 [1]. The authors of this patent described method to create weight (mass) changes, which appears in the combination of the vibration process and charge-discharge of electric capacitor, as development of relativistic approach.

Some other authors describe the methods of obtaining of propulsion force due to transformation of rotation into unidirectional impulse or propulsion force. In the most of cases authors of inventions generate propulsion force in mechanical devices due to asymmetry of centrifugal (centripetal) force. At the same time, **uncompensated force is usually directed radially in the flatness of rotation in the direction of gradient of centrifugal force**. This gradient can be provided by continuous or regulated change of radius of rotation of solid or liquid mass. For example, in the description of the invention of Russian patent claim #589150 the method of uncompensated centrifugal force generation due to change of radius of rotation of mass, which moves on internal surface of body, is shown.

In USA patent #4631971 [2] a device with two diametrically placed masses, is described. Each of these masses moves by asymmetrical trajectory, which distance to axis of rotation is changed; as a result asymmetry of centrifugal force in flatness of rotation appears. In USA patent #5427330 [3] a similar device is described, which radial bracing of rotating mass automatically becomes longer or shorter at the different intervals of the trajectory that produces asymmetrical centrifugal force and creates the movement of the whole system. USA patent #5782134 [4] describes propulsion generator, where unidirectional propulsion in flatness of rotation is generated due to regulated disbalance of centrifugal force, that allows generate propulsion force in any arbitrary chosen direction, which also lies in the flatness of rotation of the masses.

Periodical propulsion force directed along axis of rotation is generated in the device [5], where radius of rotation of two symmetrically placed solid bodies is periodically changed.

Using of solid-state rotating masses as eccentrics is not a best method since it is limited by the breaking point of the system. Some other technical ideas are known, which use liquid as working body [6]. The complexity of this system is powerful magnetic field and electric field source for generation of magneto-hydrodynamic effect, and that limits the area of practical application of the patent [6].

The simpler method is described in USA patent #3979961 [7]. In this method rotating liquid is used, which in a certain part of its trajectory comes to a

reflecting device. The interaction with the reflector make the liquid to change direction and to transmit its impulse to the body of the system.

Dr. Spartak M. Polyakov and his son Oleg S. Polyakov describe the method and device for axial propulsion force generation by change of rotation radius of a gyroscope, and they have published their experimental data [8]. According to this method working mass (gyroscope) is set in rotational motion, and then radius of rotation of the gyroscope is changed. This radius of rotation of gyroscope is the controlled parameter of working mass rotation. **At the time of decreasing of radius of rotation of working body impulse of propulsion force, which is directed along the axis of rotation, appears.** Obviously, the change of radius of rotation of working mass in this case has only periodical character; hence, this generated propulsion force is of the short-time impulse type. There is no any thrust in the period of working mass return to the previous state (maximal radius of rotation).

An already known device, which transforms rotational motion into translational motion in one direction, is described in the Certificate of the Russian Federation for Useful Device #20946 [9] by Khrunitchev's Space Research Center. This is a transformer of rotational motion of liquid (mercury) into unidirectional translational motion. The basic element is designed as a cone-spiral tube which is coaxial to the longitudinal axis of the whole device. At the time of operation a electromotor (drive), which is connected with a pump, produces the rotation of the helical-spiral tube with mercury. At the initial period of rotation there is relative velocity difference between mercury (working mass) and the tube, which forms the cone spiral. **Due to this relative velocity there is short time impulse of propulsion force directed along the axis of rotation.** However, this interaction of the liquid mass and the tube body is detected only as short (from some seconds to one minute) impulse of propulsion force, which disappears in that exact moment when the speed of rotation of liquid becomes equal to the speed of rotation of the tube body. Experiments, which were made with such a device, are described by V.A. Menshikov, one of the authors of the article [10].

We tried to create more advanced system and to get continuous propulsion force by means of effective transformation of kinetic energy of rotating mass into translation motion of the whole system. Since the effectiveness of such systems directly depends on the speed of rotation of working mass then application of liquid or gaseous mass allows greatly increase specific characteristics of the device comparably with devices where solid-state rotating masses are used. For that it was designed special cone body (picture on the cover page, at upper left) of the vortex drive to provide continuous relative difference of velocities between the working mass (water) and the body of the system. Our method also includes permanent change of radius of rotation.

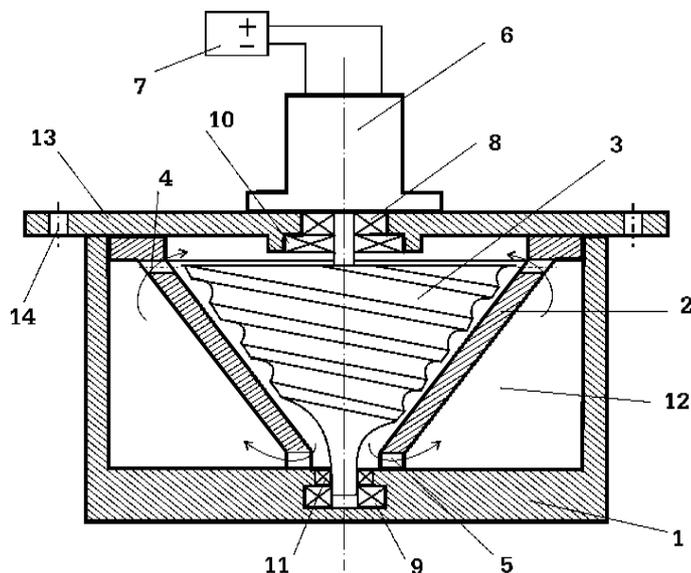


Fig.1

The cone-shaped rotor, which has a helical spiral done on its cone surface is important part of the design. Fig. 1 demonstrates the design of the experimental device. Basic components were made of aluminum. The rotor maximum diameter was about 80 mm, and in the area of outlet of liquid from the cavity of the cone-shaped body the rotor diameter was about 20 mm. A standard electric motor, which power supply was provided by the accumulator of 12 Volt value, was used to create rotation. The electric power input was about 50 Watt. The speed of rotation was regulated by means of change of voltage. Measuring of generated force was made by electric balance which accuracy was to within 0.1 g.

Obtained results allow make a conclusion about efficiency of the proposed method and the possibility of its practical application. Future design should be made to use rotation of gaseous mass since energy is the squared function of velocity and it is more useful to increase rotation speed than the mass.

### High Efficiency Transformers

Many different publications in 2002 were devoted to high-efficient resonant transformation of electric energy. Basis of this research topic is standard transformer, Fig.2 and cover-page photo, at upper right.

**Core of the transformer we have used for research is made of electrotechnical steel; cross section is 50x50 mm. Usually it can be used for 500 Watts – 1kWtts load. By means of special design and digital control unit (under investigation and testing now) we are going to create over-unity mode and then to develop it for self-running operation with some useful load. Some electronics is necessary to build the control unit but it is not expensive and in future the systems of such type (more compact if it is made of permalloy) can become a good commercial product for new energy market.**

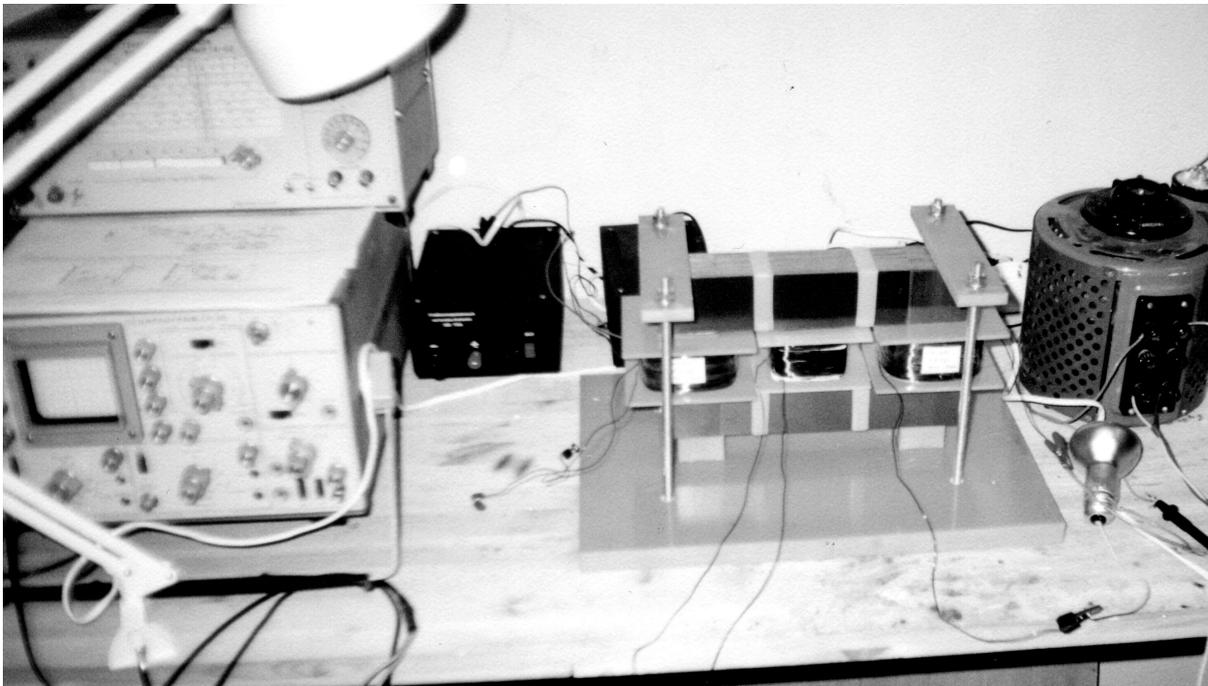


Fig. 2

### Magnet Generator - Alternator

This device was built in our laboratory and it includes ceramic Barium permanent magnets, 50x50x10 mm size, block size is 50x50x30, the magnetic field is about 1Tesla. Diameter of the rotor is about 400 mm. The principle of operation is general method of alternation of magnetic flux, Fig.3 and photo at the foot of the cover page, left.



Fig.3

Primary drive is standard electromotor, 12VDC. Original idea is special design (superposition of elements) that allows to create decrease of electric input power if useful load is connected to generator coils, i.e. the rotor is accelerated by load connection. This method was proposed by Alexander V. Frolov. In this design the back-electromotive force EMF is the reason of the acceleration effect. Future development of this principle should be self-running prototype. Theoretically, the motor can be used only for primary start and then it can be used as generator after the self-running mode is created and if

the load is connected. The design of the first experimental unit is very primitive and now we can report only about preliminary results. Only known similar design is described as USA patent, but it seems to be very complicated since plasma is proposed as material of the rotor according to this USA patent. After our patent application is filled then we will continue discussion about our results.

### Vacuum tube as power generation source

In this R&D project we have investigated possibility to increase kinetic energy of electrons by means of potential field (scalar field), if they were emitted from heated cathode of a vacuum tube. There are several methods to get positive results and we are going to increase output power from present laboratory level (of several miliwatts if standard vacuum tube GU-74 was used as basis of the system) up to industry level of kilowatts power output with the new design.

### Longitudinal wave generation and time control experiments

The longitudinal wave is considered as wave of energy density in space that allows to develop productive aether experimental approach and corresponding technical methods for space-time engineering, antigravitation and time control ideas. We have signed Contract with Dr. Chernobrov, Moscow, on the topic and other authors are also involved in the project. Special conference and workshop are planned (April 2003 in Moscow) to discuss this topic. One of the systems is a spherical design, on the body there are placed several emitters of the longitudinal waves. See Fig.4, Fig.5 and photo at the foot of the cover-page, right.

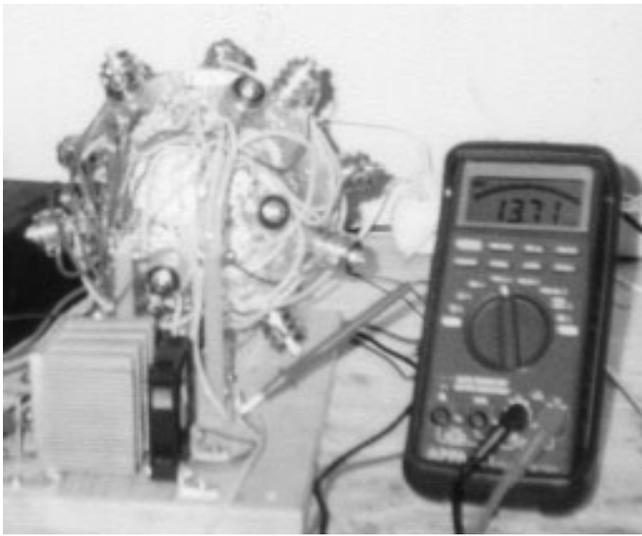


Fig.4

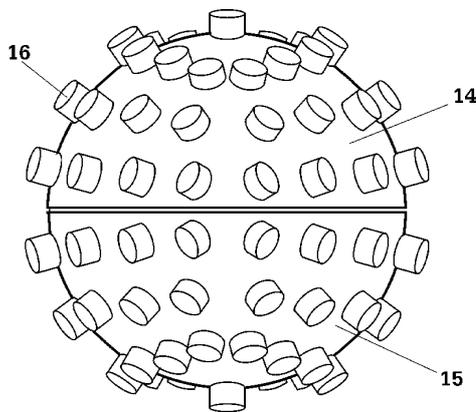


Fig.5

Detection of focused longitudinal waves in the center of the system can be made by means of any radio-electronics element, for example it can be usual resistor of the balanced scheme, transistor or quartz oscillator. The wave should produce changes of its physical properties and it can be detected as changes in the frequency of oscillations. Sure, the element should be screened to avoid usual electromagnetic effects. We have investigated frequencies up to 1MHz. To avoid any unpredictable medical effects we investigate only the very fine effects. The system is powered by 12VDC, 15 A source. But in future after clarification and confirmation of the conception we'll increase power up to any necessary for industry level to get new materials and useful medical effects by means of this technology.

Also there is supposition about possible application of the technology for aerospace as propulsion method but we still have no reliable experimental confirmation of connection between longitudinal wave technology and fact of weigh changes. Design of the longitudinal wave emitter can be made by different ways and discussion of the results is topic of our future publications. We will try to publish more theory about "time and gravity control" conception but now this experimental work can be considered as topic of aether wave technologies.

## Processing of Radioactivity Wastes

We have started this R&D work in collaboration with professionals of atom-smasher laboratory, St.Petersburg and after first tests we cannot report that we have solution of the problem. Some methods we have tested allow us to conclude that influence of the radioactivity source is possible and spectrum shift was detected but in general the level of radioactivity was not changed during the test. We will continue this R&D direction.

### Asymmetrical capacitors as electrograviticis propulsion method

Simplest tests were made to confirm calculations of the effect, which was described by T.T. Brown in his USA patent # 3187206 of 1965. Solid-state dielectric of gradialent permittivity is the topic of modern R&D work. Production of this special material is the main part of the work, which is running with professionals of St.-Petersburg institutes and organizations.

## References

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