

INNOVATION

CENTRIFUGAL MACHINE

Alexander V. Frolov

2012

Aim of the Project

It is planned

- ▣ Investigate possibility of self-rotation in experiments based on Schauberger ideas.
- ▣ Design and test experimental unit which can be used to rotate electro-generator.
- ▣ Patent the technology and start profitable business.

Applications

- ▣ The technology can be used in power industry in range of 1kW - 250 MW or more.
- ▣ This technology is serious competitor for all modern power industry market.
- ▣ Main Customer and buyer of the license will be energy providers of cities, towns, large industrial companies.

Market

- World energy market is about 50 bil. Euro per year (Bloomberg). Our possible sales can be planned to be 10% of this market that is about **5 bil.** Euro per year.
- It is planned to reach this level in 10 years.
- Planes for the first 5 years are 1% that is 500 mil. Euro per year income based on sales of licenses.

Market problems

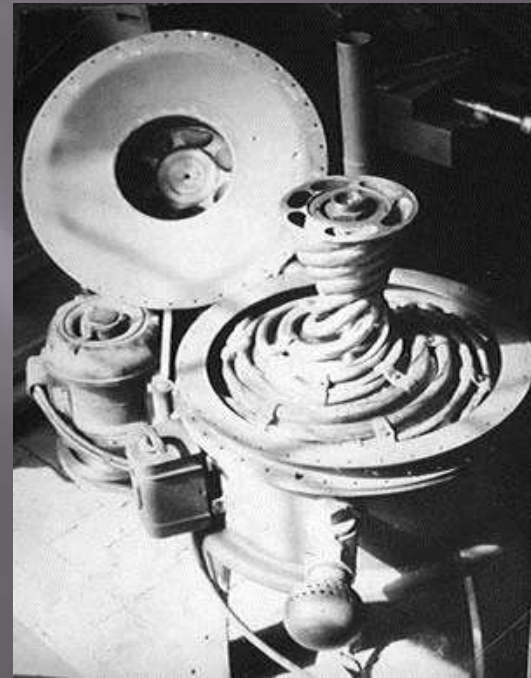
- ❑ Fuel power engineering is not low cost.
- ❑ Fuel source of energy is not ecologically pure technology.
- ❑ World market of energy sources require new sectors using technologies of generation of low cost electricity.

Advantages

Main competitors in this area are fuel turbines of the electricity generators. Their disadvantages are:

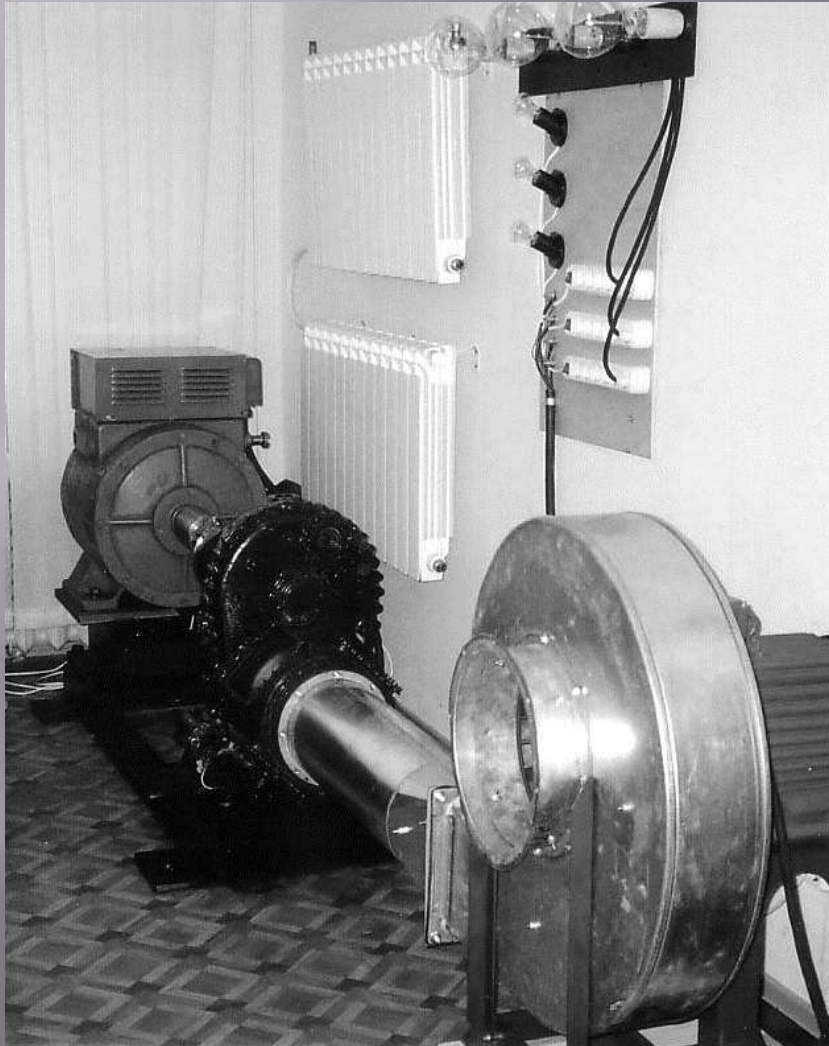
- Needs in fuel
 - Limited life time of the equipment
 - Ecology aspect (heat gas and smoke output)
- ▣ Advantages of our technology:
- Simple technical solution means more long life time and reliability
 - There is no needs in fuel
 - There is no bad ecology aspect for this technology

Technical solution by Schaubberger



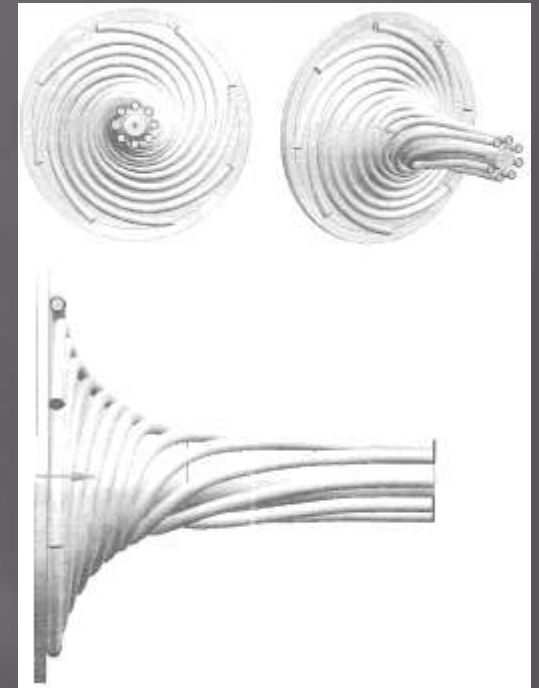
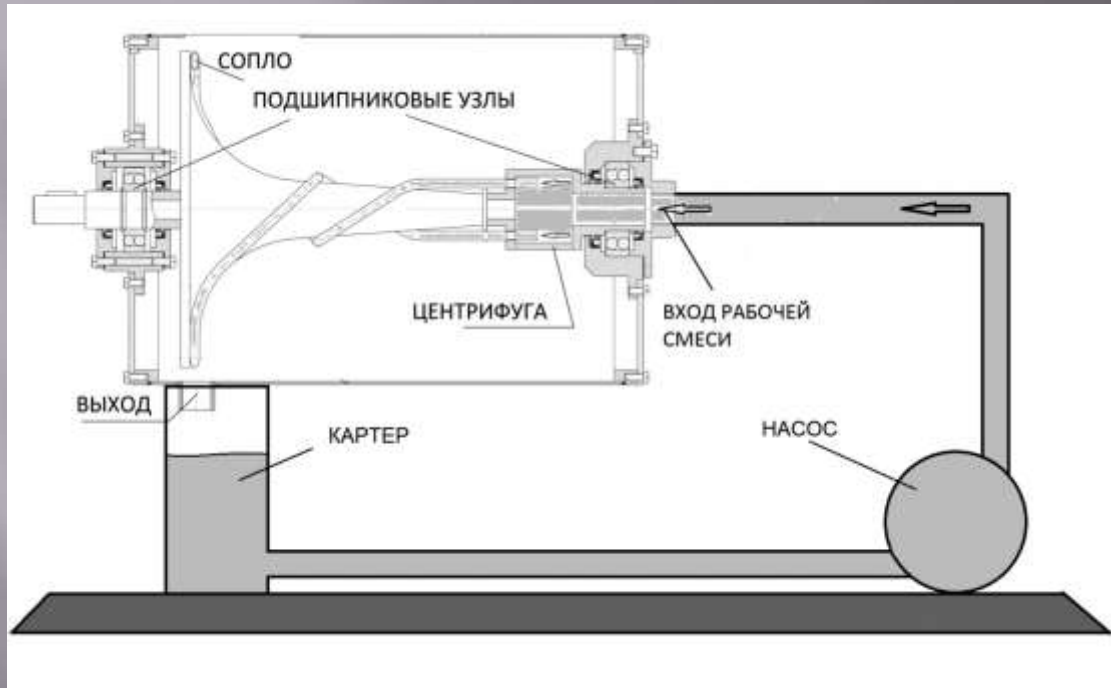
- ▣ Project of 1940.

Air vortex experiments



- ❑ In 2004-2005 Alexander V. Frolov tested important aspects of the technology. Air vortex equipment was used. Photo: air compressor, helicopter turbine and 50Kw generator. Test load is several lighting bulbs.
- ❑ Conclusion: Laminarization (linearisation) of air flow is real method to take off part of kinetic energy of air molecules.
- ❑ Laminarization of flow can be provided by passive geometrical elements of design, i.e. without additional input.

Project of 2010-2012



In 2011 “Faraday Company Ltd. designed and produced complete documentation to build experimental device of 10kW power output. Customer is working on testing and upgrade of the device. In 2012 this project was stopped.

The technology aspects

- ❑ Theoretically, input power to create rotation of mass is not depending of elastic properties of the mass. Motor will spend the same power to accelerate elastic or non-elastic liquid.
- ❑ We can get additional energy in the case of rotation of elastic liquid mass due to its elastic deformation (compression).
- ❑ Compression of elastic water+air mixture during rotation in this machine means creation of additional potential energy.
- ❑ Technology include main steps:
 - Compression of elastic working body during rotation.
 - Increase of potential energy saved in compressed elastic matter.
 - Release of potential energy during accelerated motion of the working mass along pipe of increasing radius. It is transformation of potential energy into kinetic energy. There is heat absorption from environmental media here.
 - The hydraulic system must be hermetical one to provide “implosion”.

Experiments

- ▣ The cycle of machine include two steps. First one is compression of elastic working body (liquid). By this way we can get free potential energy in rotation process. Second step is transformation of potential energy into additional kinetic energy. There are two methods on this way:
 - Separation of the steps in different parts of the trajectory of the moving working mass. Here is special trajectory of moving working liquid mass.
 - Separation of the steps in time, i.e. two-phase motor-generator mode of rotation. Helical trajectory and complex geometry of the rotor is not necessary.

Stages of the project

- ▣ First stage was calculations and design documentation. Experiments in Russia let us important experience and ideas on new design.
- ▣ Stages:
 - Calculations and design – 3 months.
 - Production of experimental device – 1 month.
 - Experiments – 2 months.
 - Patent work and development - 6 months.
 - Preparation to production – 6 months.
 - Start sales of license and own production facilities – after 18 months of the project.

Financial

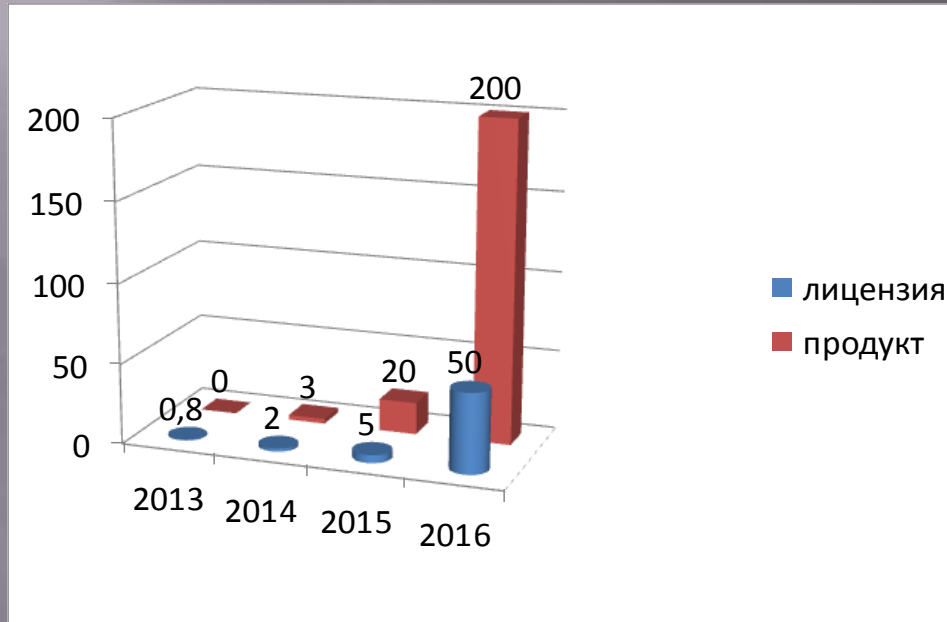
Euro

Period	Investments	Income	Profit
2012	50,000	0	-50,000
2013	250,000	1,000,000	800,000
2014	1,000,000	5,000,000	4,800,000
2015	1,000,000	25,000,000	28,800,000
2016	10,000,000	250,000,000	268,800,000

- ▣ Start risk investments 50,000 Euro. Workable prototype means no-risk stage with 250,000 Euro investments.

Marketing plan

mil Euro



Sales of license and product

Investments

- ▣ Total needs are 300,000 Euro.
- ▣ Stages:
 - Risk stage is 50,000 Euro to get reliable experimental data.
 - Next stage is non-risk investments of 250,000 Euro to develop prototypes and start production facilities.
- ▣ **Team:**
 - Investor 51%
 - Founder 39 %
 - Top managers 5 %
 - Co-authors 5%
- ▣ Exit strategy is sale of company to energy corporation.

Founder



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