



Russia, St. Petersburg

Summary

1. **Volume of investments required – \$ 500 ths.**
2. **Production** – thermoelectric modules, assemblies, autonomous electric power stations for posts of gas pipeline register, electric stove, chairs with climate-control.
3. **Trade marks** – are prepared: «Energopech», «CHAC» (system for automobile seats cooling\heating), «Autonom» (autonomous electric power stations for posts of gas pipeline register).

Company Profile

Date of establishment – in October, 1992, – on the base of the largest in the USSR SPA (scientific production association) Kvant, which developed the thermoelectric modules and systems for military and aerospace needs. At present time there are 250 employees working at our company including 13 PhDs.

Signs of public recognition – in 2004 the Universal Biotechnological thermostat was developed, manufactured and tested by Kryotherm company. It was made for International Space Station. The thermostat was delivered there by Spacehab company under the order of Japan company Mitsubishi and Japan Space Agency JAXA.

Number of employees – 250 persons.

Team

Shmatko Michael – Director General, 43 y.o., PhD. During his heading the Kryotherm he keeps the scientific-technical potential of our company, so the Kryotherm occupy the leading place in the world market.

Vinokurov Alexander – Vice-General Director, 47 y.o., PhD. He possesses the universal combination of experience in the scientific environment and business field.

Gershberg Igor – R&D Director, 54 y.o., PhD. He is the unique scientific specialist in the field of thermoelectricity.

Products characteristics

The thermoelectric modules, assemblies, the goods on the base of TECs.

The chairs with climate-control (CHAC). The area of appliance: automobile chairs, chairs for office of the lux class, wheelchairs, chairs for old people, chairs for aerial pilots, locomotive drivers, etc., specialized beds for medical offices. The base of the system is high-tech thermoelectric modules of Kryotherm production. This fact allows our company to gain a number of advantages in accordance with the traditional automobile climate-control systems:

- to reach the desired temperature comfort, the CHAC chairs need far less time;
- the CHAC chair let each passenger to put the individual temperature of his chair (cooling or heating);
- the CHAC chair in comparison with the traditional systems gives the direct contact of the body of the passenger with the source of cooling\heating on account of changing the temperature of the chair surface;
- the harmful and dangerous substances aren't used in the CHAC chairs production, the noise and vibration are absent.

Electric stove – supply the autonomous consumers with electric energy, light and heat. The only analogue of it is the Philips woodstove, however, Philips pay special attention on the fuel burn efficiency and ecological compatibility. In Kryotherm electric stoves at keeping the abovementioned characteristics the attention is payed for high efficiency at electric energy producing and its universal adaptation for using in the different devices. The works are at the stage of prototype making. First steps in the direction of patenting take place at present.

A autonomous electric power stations for posts of gas pipeline register – allow to supply with electric energy the equipment of safety systems and communication systems, counting and lighting devices of posts of gas pipeline register. The similar goods are produced by following companies: "Saratovgasautomatics", "Posit", "Global Thermoelectric". The goods produced by Kryotherm advantageously differ by considerably less overall dimensions and cheaper price.

Current state

Kryotherm is a successfully working production with turnover of \$ 4 mln and profit of \$ 1 mln. Demand in investments is explained by the lack of own circulating assets for realization of a number of profitable projects.

Development strategy

Use of funds

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|----------------------------------|-----|
| 1. R&D | 25% |
| 2. Acquisition of fixed assets | 25% |
| 3. Marketing | 15% |
| 4. Acquisition of current assets | 10% |
| 5. Other | 25% |

Such structure is conditioned by investments of part of private Kryotherm means in R&D and fixed assets purchasing.

Prospective outcome of investment

The production and sales of the following goods will be developed:

- thermoelectric generator with power 15 Wt for radio and telecommunication means feeding in the extreme and field conditions for Saving Services, oil and gas industries;
- thermoelectric generator with power up to 500 Wt for systems of control and cathode defense of oil and gas pipelines;
- systems of cooling and thermo stabilization for telecommunication equipment, server and multiprocessor stations and servers with point heating stub, optical and optoelectronic including powerful laser systems;
- the chairs with climate-control CHAC. Thermoelectric systems of conditioning for different transport means.

In the nearest 4 years the growth of sales is planned to be increased in 4.5 times.

Marketing & Markets

At the enterprise there is Marketing Department, which is responsible for organization of the goods sales. It is notable for high professional level specialists in the field of foreign economic activity, experience in the Customs clearance. Product realization is performed by one-time contracts. The absence of long-term contracts is explained by a large quantity of Specifications for manufacturing products and easiness of bank and Customs arranging. In spite of one-time deliveries and large quantity of concluding contracts Kryotherm has commercial agreements and suggestions for long-term perspectives of main consumers using of its products. There is also Marketing Department at the enterprise, the duties of which include prices for products composing, searching of the potential consumers, sending of testing samples.

For enlarging of customers quantity Kryotherm take part in many exhibitions, seminars and conferences devoted to thermoelectricity in Russia and abroad.

The thermoelectricity market is represented by the following companies:

Laird/Melcor (Great Britain/USA). More than 1 mln modules per year, sales volume is about \$ 12 mln. Ferrotec (USA/Japan). About 2 mln modules per year, sales volume is about \$ 20 mln. II-VI/Marlow (USA). Up to 500 ths modules per year, sales volume is about \$ 10 mln. Kryotherm (Russia). Up to 750 ths modules per year, sales volume is about \$ 5 mln. Module (Ukraine). Up to 750 ths modules per year, sales volume is about \$ 5 mln. Chinese manufacturerers – up to 10 mln modules per year, sales volume is up to \$ 35 mln per year.

World total sales volume is \$ 200 mln per year. Sales volume of thermoelectric product is more than \$ 3 bln.

At present the negotiations with companies Hyndai and Lengaztrans take place. Kryotherm is going to contact with Gazprom structure all over Russia, gas producing companies, automobile, furniture and medical companies of all around the world by the means of meetings and presentations organizing.

Interaction with investor

The supposed share of investor is 25%. The dates of project payback is 1.5 years. During the first four years the forth times increasing of the invested capital is expected. The guarantees: private means investment, taking part in the administration, transparency of activity.