

Volume of investments required: **\$ 6 750 thousand**

Intended use of investment required:

Fixed assets acquisition (new processing line for scrap tire recycling)	95%
Marketing (of textile cord)	5%

Company profile:

1. Date of establishment - December 22, 1992.
2. Stage of development - Expansion
3. Size and source of investment to date - Reinvestment
4. Industry - solid waste recycling, recovery of secondary raw material
5. Target market
 - Devulcanized rubber, high quality bituminous concretes, rubber-bituminous mastic, roofing materials, as a filler in composite thermoplastic materials, an oil sorbent from water surface.
 - Textile cord - producing of thermo and sound insulating tiles, plugging-back of oil well, used as reinforcing filler for elastomeric compounds.
 - Metal cord - feed stock for low grade steelmaking, used as reinforcing filler in construction and road materials.
6. Sales in 2003 - \$ 248 th.
7. Description and value of assets - \$ 2,370 th. Processing line (mini plant) for scrap tires recycling, permanent structures, plumbing system, engineering services.
8. Intellectual property rights - Altogether regarding particular subject 7 patents are taken, owned to director (company owner).
9. Signs of public recognition - The company was included in first catalogue of the best ecologically directed enterprises "Green pages of Russia" 1995/1996". A number of articles in different ecological periodicals, a number of central TV reportings. In 2003 according to Russian Academy of Science recommendation the company was awarded with "Russian National Olimpus" prize.

Owners:

ASK Company	90%
Several persons	10%
Share of government property	0%

Management and key personnel:

Yuri Shteinberg - Director, 54, established the company, initiator and driving force of the project. Previously – successful general manager of the number enterprises of the region.

Elijah Volkov - Deputy Director, 35, Manager and shareholder of "Amber + group" established 13 years ago.

Stanislav Vasilyev - Deputy Director, 29, head economist of «Lukoil-Permnefteorgsyntes».

Products characteristics:

Company products are the output of scrap tires recycling. The tires are continuous environmental polluters. Tire burial is prohibited by international law and landfill is quite hazardous since the tires are not biodegradable but for all that they bleed unhealthy compounds. More over it is almost impossible to extinguish the occasional fire. The tire profile allows accumulating the water which makes it a perfect reproduction conditions for sanguivorous infection carrier insects. Thus, by solving one of the most important environmental problems we delivers the following fine merchantable products:

1. Rubber powder with very high adsorbing power, high chemical activity, vast specific surface and after devulcanization is alike to caoutchouc (unvulcanized rubber).
2. Metal cord is high carbon spring steel (of a grade 70).
3. Textile cord is synthetic fiber as fuzz.

Comparative analysis with existing alternatives:

Characteristics	«Astor», 1997	Chekhov's regenerating plant	«Kama EcoTech»
Recycling technology	barodestruction	shredding	cryogenic
Powder fractions, mm	0,1-1	0,1-0,5	0,1-1
Annual powder output, tons	4 000	800	48
Chemical activity	High	Good	Minimal
Adsorption	High	mid low	low
Consumer behavior	«excellent»	«good»	«medium»
Cost per ton, \$	300/267	258	340/320

The tire recycling might be divided into the following categories:

The shredding requires high endurance cutting blades. Although there are many different grinders invented still there's no reliable enough equipment.

Cryogenic method is the most power consuming and obtained powder is not suitable for further using.

The burning loses the valuable rubber and additionally requires expensive waste treatment facilities trapping unhealthy gases and heavy metal compounds.

The pyrolysis is very similar to simple burning, end products contain benzapilene and hazardous to the human health.

The other methods like Ozone Blade or explosion still not introduced into production.

The Bar destructive technology is different in kind (according to the experts from International Executive Service Corps, USA, www.iesc.org, it is unique all over the world). Technology is low power consuming, waste less, compact and absolutely ecologically sound – has no any industrial emissions at all.

More over, unlike the others, our rubber crumb has very vast specific surface which significantly increases chemical activity and therefore extend the application scope.

Economical grounds for using the rubber powder as raw rubber substitute are its low cost, almost null competition in that segment, ever-growing demand for caoutchouc whilst shortage of supply (acc. to Statistic State Committee and Ministry of Economics of Russia - express-information "Russian and world market of oil, oil products, petrochemistry and chemistry " - CNIITE petrochem, Moscow, 2002-2004)

Markets/Competition:

More than 80 % of all tires in the world not recycled in no way. The market is just forming, so to speak about competition for sources of raw material market and outlet is premature. In Russia annually run out of use more than 1 million tons of tires. Over Moscow region this rate is more than 70 th. tons, in St-Petersburg region - circa 60 th. tons. Thus, annual tire wastes any region will provide the load for two or more mini-plants.