

Filter media

Russian air filter manufacturer eyes global markets

The CEO of Russian air filter manufacturer Tion, has disclosed that by 2022, the company will have established substantial export markets for its air purification systems, specifically within China and Europe.



Moscow's Sklifosovsky Institute, Russia's leading medical centre is equipped with Tion filters

Speaking recently, Tion's CEO, Vladislav Salimgareev, said that the company will be primarily targeting wastewater pumping stations and health maintenance organizations. Over the past decade, Tion has become the largest Russian provider of air purification solutions for health facilities, supplying around 7,000 filter systems for 700 medical centres across the country, including the most advanced facilities, such as the Moscow Sklifosovsky Research Institute of Emergency Medicine.

Small beginnings

Tion was established in 2006 by a small group of young Siberian scientists with very little capital or resources. Salimgareev himself describes it as a "garage start-up", but from these humble beginnings and the efforts of those young scientists, Tion has grown into a national group of companies in Russia which still maintains the spirit and energy of that original young team.

One of the company's specialist areas is developing original filtration equipment. Salimgareev explains about this side of the business: "This equipment purifies air from any type of contaminants with only one pass. This allows us to supply our equipment to a broad range of industries, from medical centres, where requirements for the quality of filtered air are stringent, to wastewater pumping stations, restaurants, even nuclear power plants and ordinary houses."

The healthcare sector has always been an important area for the company, with hospitals and health facilities among its best customers. According to Salimgareev, Tion created a small revolution in the sector when it overcame the problems of the disinfection process in medical centres. Up to this point, heads of medical centres did not trust new technology and would not consider any disinfection process without ultraviolet light.

Salimgareev explains how the company managed to make a difference. "At the very beginning, we started very simply. We went to the chief medical officer, offered our product and offered to test it for them. The healthcare facility itself also conducted testing, measuring bacterial content in the air before, during and after use of our filter system. The difference was quite significant and after a while, we achieved a large number of positive responses from medical centres about the effectiveness of our equipment."

As a result of this, Tion began a period of substantial growth from 2010. According to Salimgareev, sales were doubling every year. Over the next few years the company became a major supplier of filters for healthcare facilities.

Complex tech, easy to use

Salimgareev says that the company's air filter systems are very easy to use, despite their complicated structure. Tion's systems employ multi-stage cleaning and the first stage is a pre-filter.

He explains that the task of the first stage is to separate large contaminants, in order to protect the rest of the system and ensure that it is not loaded with too much dirt. The second stage makes use of an ozone-generating unit or electrostatic unit. Here, two processes are taking place. All pollutants from the air obtain a negative electrical charge and then they go through the precipitator filters.

According to Salimgareev, the precipitator filters are a vital part of the process and a key element of the company's technology because Tion manufactures these filters itself with the use of nanotechnologies and so they differ from similar products manufactured elsewhere.

"They are produced from a special type of polypropylene. This polypropylene is melted and with the use of a special extruder, a fine thread of this polypropylene winds round the rotary shaft. After that, this filter takes the polypropylene from the shaft. It is very large with holes inside. Because it is so large, it has much more capacity compared to paper filters or HEPA filters," Salimgareev explains.

Nanotechnology

In 2014, Tion was registered as company operating in the field of nanotechnologies.

According to the company, nanotechnologies are used during the production of precipitator filters and it can filter out any pollutant which are larger than 2.5 micron.

In general, Tion filters are more effective because of the porous structure and the fact that the company does not apply the principle – "less holes, the less pollutants are able to penetrate." According to Salimgareev, the electrostatic field significantly improves the effectiveness of the filtration mechanism, because all pollutants simply stick to the filtration units.

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