First afterburner will be implemented in a Vortex® furnace.

Afterburner, used in the industry for pollution reduction, will be implemented in the flagship product of the aluminum segment.

Thermal afterburners are used in the industry to destroy industrial contaminants such as hazardous air pollutants (HAP), volatile organic compounds (VOC) as well as industrial odors and vapors.

Volatile Organic Compounds (VOC) are a group of organic compounds which easily volatilize or vaporize with the presence of sunlight. At the same time, they release hazardous substances into the environment. Volatile organic compounds (VOC, TVOC) contain various chemicals. Some of them can have short-term or long-term detrimental effects on people's health. Short-term effects on health include eye, nose or throat irritation, headaches, coordination impairment and nausea. Long-term effects can cause serious liver, kidney or central nervous system failure. Long-term exposure to a high concentration of VOC can cause cancer.

In a thermal afterburner, after heating up to the appropriate temperature, the above-mentioned volatile organic compounds (VOC) act as a fuel, ensuring complete combustion. During the combustion process, the contaminants are chemically transformed into neutral by-products of combustion such as water and carbon dioxide which can be safely discharged as flue gas.

Sample applications of afterburners in the industry include: food and coffee processing, metal casting, paper production, metal processing, the automotive industry and more.

Volatile organic compound (VOC) afterburner is a standard product in our company's portfolio supplied together with a degreaser (a device for thermal removal of oil) and included in the CAB line. There is an ongoing (the first in the Group's history) implementation of afterburner for the aluminum coil annealing process in Vortex®-type furnaces. One of the manufacturers of flat aluminum products wishes to introduce a new product – the 'chequer aluminum plate'. During rolling and chequering, a significant amount is used, resulting in emissions of hazardous VOC. In order to protect people's health and the environment, it is important to deliver a solution that ensures process safety.

The main advantages include the combustion of volatile organic compounds under temperatures as low as 650°C and the efficient reduction of VOC to 30mg/Nm^3. Therefore, it is a small device which is mainly designed to protect the environment. We hope that in the future the product will help us to gain a new area of cooperation with our customers and that it will improve the competitiveness of aluminum coil annealing equipment of Vortex® and Mass flow types.