

BISCAT – CERAMIC CATALYST FILTER

30 Jan 2019

GEA has developed high-temperature filters with ceramic elements that enable the removal of NO_x, dioxins, mercury and VOC through an integrated catalyst matrix. BisCat ceramic catalyst filters are chemically inert and corrosion-resistant. This means that for many applications only one single system is required instead of three.



Particle separation takes place with the aid of filter elements made of mineral fibres, the so-called ceramic candle. These candles are well proven and very flexible to use even with regard to modifications of operating parameters, especially at high gas temperatures. No cooling of flue gases is required and no thermal heat energy is wasted. Filter elements are cleaned from separated dust online during operation by means of separate, compressed air jet pulses. The single or multi-sectional housings developed by GEA allow a maximum filter length of 6 m. This means that even large gas volume flows can be cleaned. The design of the system allows maintenance of the individual elements during operation.

By injecting lime-based reagents, inorganic pollutants such as HF, HCl, SO_x can also be absorbed.

GEA has further developed the ceramic filter elements and enriched them with a catalyst. In addition to particles and acid gases, nitrogen oxides can thus be efficiently separated after prior injection of ammonia. This replaces the conventional selective catalytic reactor (SCR).

The [GEA BisCat filter system](#) thus combines the 3 process stages of dedusting, separation of acid components and reduction of total hydrocarbons (Total Hydrocarbons, THC) and nitrogen oxides (NO_x) in one unit. Applications include the cement and glass industries, incinerators, refineries and roasters.

GEA is represented with a booth at POWTECH 2019 from April 9 to 11 at the Nuremberg trade fair. Visit us in hall 3, booth 3-231.

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About GEA

GEA is one of the world's largest systems suppliers for the food, beverage and pharmaceutical sectors. The international industrial technology group specializes in machinery and plants as well as advanced process technology, components and comprehensive services.

With more than 18,000 employees, the group generated revenue of more than EUR 4.6 billion in fiscal year 2020. A major focus is on continuously enhancing the sustainability and efficiency of customers' production processes. GEA plants, processes and components help achieve significant reductions in carbon emissions, plastic use and food waste in production worldwide. In this way, GEA makes a decisive contribution toward a sustainable future, fully in line with its corporate philosophy of "engineering for a better world." GEA is listed in the German MDAX and the STOXX® Europe 600 Index, and is also among the companies comprising the DAX 50 ESG and MSCI Global Sustainability Indices.

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GEA is one of the world's largest suppliers of systems and components to the food, beverage and pharmaceutical industries. The international technology group, founded in 1881, focuses on machinery and plants, as well as advanced process technology, components, and comprehensive services. With more than 18,000 employees working across five divisions and 62 countries, the group generated revenues of more than EUR 4.7 billion in fiscal year 2021. GEA plants, processes, components and services enhance the efficiency and sustainability of production processes across the globe. They contribute significantly to the reduction of CO2 emissions, plastic usage and food waste. In doing so, GEA makes a key contribution toward a sustainable future, in line with the company's purpose: "Engineering for a better world".

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