



Catalytic Hot Gas Filtration

Catalytic Candle Filter (CCF) technology for multi-pollutant exhaust emissions control

Dürr's CCF systems achieve the highest levels of NO_x, SO_x and PM control, maintaining 90-95% DRE – depending on application. The integrated SCR catalyst is protected from plugging and poisoning by the residual dust layer, ensuring optimal DeNO_x performance across a wide temperature range. Additionally, CCF technology can control volatile organic compounds (VOC), dioxins, and mercury.

THE BENEFITS



Simultaneous removal of particulate matter (PM), acid gases (HCl, SO_x) and NO_x

Adaptability to different volumetric flow rates

Higher separation levels

Lower risk of an unwanted reaction between ammonia and sulfur compounds

Increased efficiency because of the higher temperature range of up to 400°C

Catalytic Candle Filter (CCF)

CAPEX-SAVING POTENTIAL – INDUSTRYWIDE

Many industrial processes are benefitting from savings in capital expenditure (CAPEX) derived from the synergies of a “3-in-1” technological approach to multi-pollutant control, applicable to both low and high temperature applications, including:

- Glass furnaces
- Industrial roasters
- Coal-fired boilers
- Cement & lime kilns
- Metals’ processing
- Incineration plant

DUST & ACID GAS CONTROL

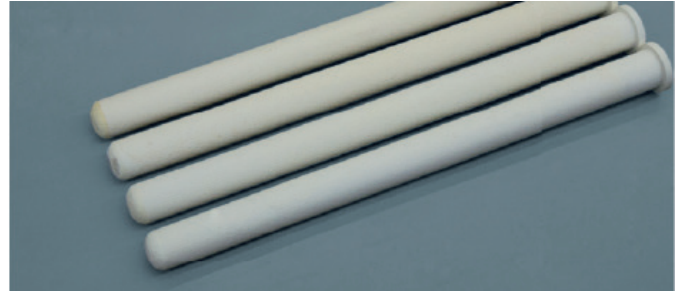
The control of particulate matter (PM) and acid gas (SO_x, HCl) emissions from industrial applications using low density candle filter elements is a well-established, commercially-available technology. Dust removal is achieved via a reversed pulsed air technique, the rigid filter media retaining a residual dust layer at all times, ensuring optimal surface filtration versus pressure drop (ca. 20 mm/0.8 in wc) over the filter elements, which typically measure 0.15 m x 3.00 m/6 in x 118 in (D x L).

HOT GAS FILTRATION

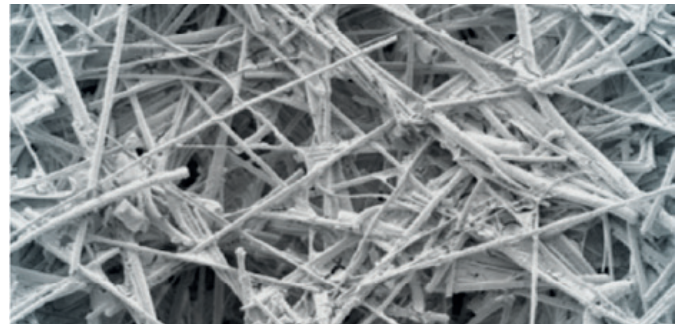
More recently, high thermal shock-resistant candle filter technology has found increasing application in industrial processes requiring hot-gas filtration (HGF), particularly at temperatures running between 350°C - 400°C/660°F - 750°F, where traditional fabric filter systems are unusable.

MULTI-POLLUTANT CONTROL – CATALYTIC CANDLE FILTER

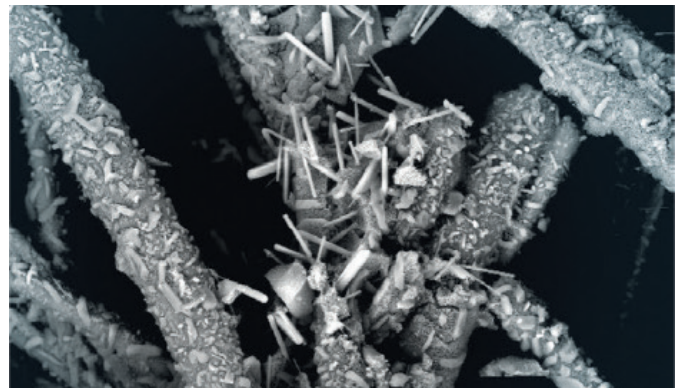
The addition of a fine layer of SCR-based catalytic coating to create a catalytic candle filter (CCF) takes the technology one step further – enabling highefficiency, “3-in-1” multi-pollutant control of oxides of nitrogen (NO_x) – as well as acid gases and PM – when used in combination with the appropriate reductant and sorbent media.



Ceramic candle filter elements



Close-up of fibrous filter structure



Catalytic coating of the filter fibers



Section showing filter flange design



Dürr Systems, Inc.
Clean Technology Systems
830 Prosper Street
De Pere, WI 54115
USA

Phone: +1 920 336-5715
E-Mail: sales.cts@durrusa.com
www.durr.com