LEADING IN PRODUCTION EFFICIENCY

CATALYTIC HOT GAS FILTRATION

CATALYTIC CANDLE FILTER (CCF) TECHNOLOGY FOR MULTI-POLLUTANT EXHAUST EMISSIONS CONTROL

CATALYTIC CANDLE FILTER (CCF)

CAPEX-Saving Potential – Industrywide

Many industrial processes are profiting from savings in capital expenditure (CAPEX) derived from the synergies of a "3-in-1" technological approach to multi-pollutant control, both for 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 thereby ensuring optimal surface filtration versus pressure drop (ca. 20 mm wc) over the filter elements which have typically dimensions 0.15 m x 3.00 m (D x L, m).

Hot Gas Filtration

More recently, high thermal shock resistant candle filter technology has found increasing application in industrial processes requiring hot-gas filtration (HGF), in particular, at temperatures in excess of 250 °C where traditional fabric filter systems are unusable.

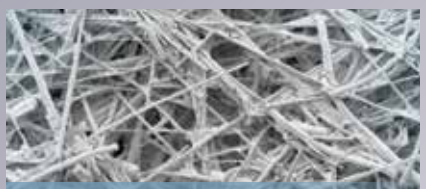
Multi-pollutant Control – Catalytic Candle Filter

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 high-efficiency, "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.

Ultimate Performance & Durability

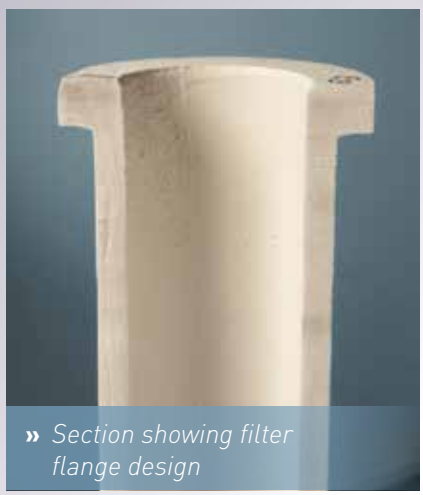
CCF systems are capable of the highest levels of NO_x, SO_x and PM, control, often in excess of 90 % – depending on application. Since the integrated SCR catalyst is protected from plugging and poisoning by the residual dust layer, optimal $DeNO_x$ performance is achievable over the widest possible temperature range. Volatile organic compounds (VOC), dioxins and mercury can also be controlled using CCF technology. Several installations have now been in operation for well over five years demonstrating clearly the long-term durability of CCF technology.

» *Ceramic candle filter elements*



» *Close-up of fibrous filter structure*

» *Catalytic coating of the filter fibres*



» *Section showing filter flange design*

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