



World's Largest Supplier of Ceramic Catalyst Filter Systems

Boiler MACT • CISWI MACT • Cement NESHAP

All-in-One Solution

Tri-Mer Ceramic Catalyst Filter Systems are state-of-the art for removing particulate (PM), SO₂, HCl, mercury and heavy metals. Simultaneously, the ceramic catalyst filters destroy NO_x, cement organic HAPs, and dioxins. Systems can be configured for any combination of the pollutants.

The system is completely dry, with no water consumption. Disposal of the dry collected waste is straightforward. Large gas flow volumes can be accommodated.

Particulate Control

Tri-Mer Ceramic Catalyst Filters are excellent at removing all sizes of particulate from gas sources above 300°F, including PM₁₀, PM_{2.5}, and submicron. Typical outlet levels are less than 0.001 grains/dscf (2.0 mg/Nm³) regardless of inlet loading.

NO_x Control

Catalytic filter tubes have nanobits of SCR catalyst embedded in the filter walls. Operating range is 350°F to 950°F. The exceptionally large reactive surface area of the micronized catalyst produces high NO_x removal at temperatures notably lower than standard SCR. Good results start at 350°F and improve to 95% removal at 450°F and above (standard "big block" SCR requires 650°F or higher for similar efficiency).

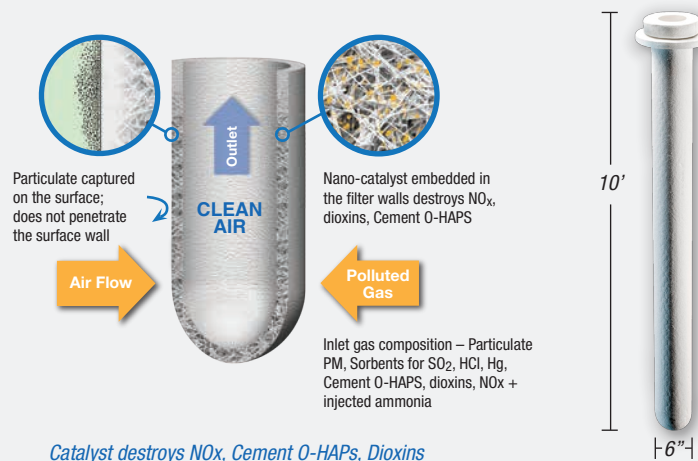
The unique structure of the filters captures process particulate on its outer surface, thus keeping it away from the nano-catalyst inside the filter walls. This prevents PM blinding and poisoning of the catalyst and greatly extends the catalyst life compared to standard SCR.

Cement O-HAPs and THC Control

Cement organic HAPs are also destroyed by the embedded catalyst. Good removal on the primary Cement O-HAPs occurs at temperatures over 400°F, with excellent results on all Cement O-HAPs approaching 500°F. Dioxins are also destroyed by the filters, typically with 95% efficiency or better at temperatures up to 500°F.



Cut-away of Filter Tube with Embedded Nano-catalysts



Catalyst destroys NO_x, Cement O-HAPs, Dioxins

SO₂, HCl, Acid Gases, & Mercury Control

For dry scrubbing of acid gases, Tri-Mer filter systems use injection of hydrated lime or SBC upstream of the filters. Removal of SO₂ is typically above 90% and HCl better than 97%. The approach for mercury depends on the Hg species in the gas. Activated carbon and other sorbents, some blended with the acid gas sorbents, are selected on a case-by-case basis.

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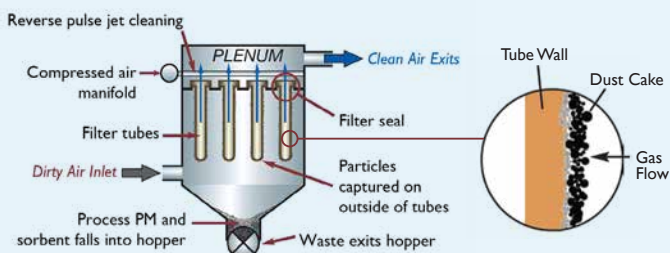
CERAMIC CATALYST Filter Systems

Controls PM, SO₂, HCl, Hg, NO_x, Dioxins, Cement O-HAPs



Operation and Maintenance

Tri-Mer's Ceramic Catalyst Filter System uses a baghouse configuration with a reverse pulse-jet cleaning action. The filters are back-flushed with air or inert gas. The design has been engineered for easy filter installation and maintenance. Filter tubes are manufactured in various sizes, the largest of which is 10' long and 6" in diameter, including an integral mounting flange. Filter life averages 5 to 10 years on most applications.

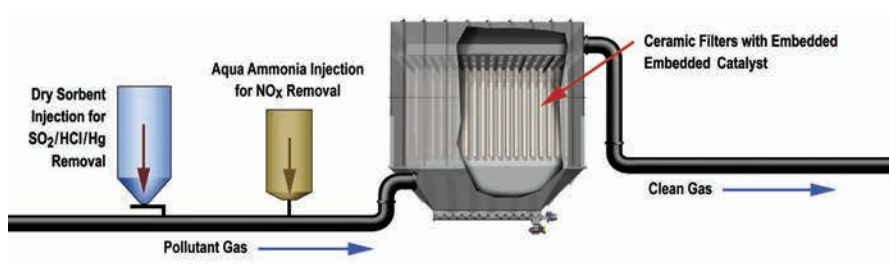


*Reverse pulse-jet cleaning mechanism for the filter tubes.
Filter tube wall is 3/4" thick with catalyst embedded inside.*

Initial system cost is lower than competing options, with much better performance and flexibility. Pressure drop is 4" w.g. – lower than the total energy usage of multi-step systems.



Modular systems to treat any flow volume



Controls PM, SO₂, HCl, Hg, NO_x, Dioxins, Cement O-HAPs

Tri-Mer's Ceramic Catalyst Filter System is the Low Cost Solution

Tri-Mer Corporation, a technology leader in air pollution control, provides turnkey engineering, manufacturing, installation, and service of its ceramic catalytic catalyst filter systems.

Tri-Mer Corporation

Factory and Headquarters
1400 Monroe St., Owosso, MI 48867

Primary Applications

- Boiler MACT compliance for coal, biomass, wood
- Cement NESHAP Organic HAPs
- Glass furnaces
- CISWI Incinerator MACT
- Stationary diesel for ships at dock
- Metal smelting, mineral processing
- Chemical production

More Applications

Air Pollution Control

- Medical waste
- Soil cleaning
- Foundry processes
- Energy production
- Fire testing
- Many specialized high temp applications

Product Collection/Recovery

- Titanium dioxide production
- Fumed silica production
- Catalyst manufacturing
- Platinum smelting
- Metal powder production
- Activated carbon production