

Emissions Reduction Catalyst Technology

Customized Catalyst Solutions:

- SCR Catalysts
- Multi-Function Catalyst (METEOR™)
- Oxidation Catalyst (CO/VOC, DOC, ASC)
- Regeneration
- Laboratory and Field Services



CORMETECH, Inc. is a world leader in manufacturing of high-quality and reliable emissions control catalysts for the electric power generation, industrial, petrochemical, refining, mobile and marine industries. The USA based company has leveraged more than 30 years of experience and technology to create innovative catalyst products and services that meet and exceed our customer's needs around the world.

Coal Power Applications

CORMETECH designs and manufactures NEXTGEN catalysts for coal-fired applications to assure long-life and high performance. The catalyst is suited for a variety of coal types that produce a range of flue gas properties and temperature ranges, including high and low dust applications. CORMETECH's catalyst geometry and composition maximizes catalyst surface area and minimizes deactivation caused by poisons, such as arsenic and calcium oxide.

CORMETECH COMET®

This advanced SCR honeycomb catalyst is tailored to provide a high level of mercury oxidation under very challenging conditions. The catalyst maximizes the conversion of elemental mercury (Hg⁰) to a watersoluble oxidized (Hg²⁺) form for subsequent capture via absorption in the downstream wet FGD. Further, it allows coal-fired power plants to meet stringent mercury emission standards like the Mercury and Air Toxics Standards (MATS) and can be used alone or in combination with Activated Carbon Injection (ACI) to optimize cost effective solutions.

CORMETECH DUST BUSTER®

This catalyst delivers optimized channel geometries that facilitate the flow of ash-laden flue gas through catalytic surfaces with high DeNOx activity. DUST BUSTER has all the product reliability, performance and catalyst life cycle benefits that come from utilizing a 100% catalyst material structure, with the added benefits of uniform, large hydraulic diameter rectangular openings which significantly minimize dust



build up and catalyst fouling inside the reactor, while also delivering very low SO₂ to SO₃ conversion.

Regeneration

CORMETECH has been a pioneer and leader in regeneration with over 20 years of experience with our patented cleaning and regeneration processes. The regeneration process removes catalyst deactivation compounds and restores catalyst activity for all types of SCR catalyst (i.e. corrugated, honeycomb and plate). Catalyst regeneration reduces operation and lifecycle management costs. Our Selective Impregnation® process achieves a lower SO₂ to SO₃ conversion ratio while maintaining a higher catalyst activity.



Regeneration restores catalyst activity back to original OEM levels.

Natural Gas and Stationary Applications

CORMETECH offers a wide variety of customized SCR catalyst and specialty compositions and geometries to fine-tune catalyst properties for optimal performance at a range of operating temperatures (typically 300°F – 1100°F) for Combined Cycle / HRSG, Simple Cycle / Combustion Turbines, Stationary Diesel / RICE, Refinery, Petrochemical and Industrial applications. Our catalyst modules can be designed for horizontal or vertical flow orientations, as well as large module or small canister configurations. The robust design of our catalyst and its modular frame maximizes emissions reduction and catalyst life at the lowest exhaust pressure loss.

CORMETECH ELITE™

This honeycomb catalyst platform is a combination of ultra-high surface area catalyst and patented pleated module construction that offers increased

catalytic potential, decreased exhaust pressure loss. ELITE catalyst can reduce exhaust pressure loss by >60% and its integrated seal technology practically eliminates packing material, reducing the need for maintenance.

CORMETECH METEOR™

METEOR is an advanced multi-pollutant honeycomb catalyst technology engineered in a variety of forms that can be fine-tuned to control nitrogen oxide (NOx), carbon monoxide (CO), volatile organic compounds (VOC) and Ammonia (NH₃) emissions across a wide temperature range. Key benefits can include facilitation of smaller reactor / duct footprint, enhanced efficiency through reduced exhaust pressure loss, broader low load flexibility, reduced sensitivity to catalyst fouling agents and lower maintenance costs.

There are currently three customizable METEOR technologies:

- METEOR M1 NOx, CO and VOCs
- METEOR M2 Ammonia Slip Control (ASC)
- METEOR M3 CO and VOCs (DOC)



CORMETECH's catalyst can be cut and engineered to order.

Mobile and Marine Applications

CORMETECH's SCR and METEOR catalysts are performing NOx reduction and CO/VOC oxidation in non-stationary applications to assist with meeting requirements such as IMO Tier III, EPA Tier 4, Stage V, China VI and Euro VI. The catalysts are designed to perform across a broad range of fuels and operational / functional requirements of mobile and marine applications focusing on excellent hydrothermal aging resistance, low N₂O production, balanced NO₂ generation, ammonia slip reduction and low temperature performance.



To support the successful application of our catalyst products, CORMETECH provides a broad range of asset optimization services:

Turnkey Catalyst Solutions
CORMETECH's Project Managers
will handle everything including but not
limited to catalyst delivery, removal of existing
catalyst, installation of new catalyst, startup
support and long-term performance data monitoring.
This "one stop shop" reduces risk and cost while
improving efficiency and effectiveness.

Inspection and Cleaning

SCR inspection and a wide range of cleaning technology / service solutions are essential in planning an effective catalyst management program as each SCR outage represents an opportunity to learn more about operating conditions, to better design and implement actions for improved performance and reliability, extended lifetime and reduced O&M costs.

Catalyst Management

On-site physical inspections of the catalyst, reactor, and ammonia injection system along with laboratory

testing are key elements of an optimization strategy to extend the life of the catalyst. Custom solutions including detailed modeling, catalyst performance plans, future testing schedules, catalyst cleaning, catalyst restoration, regeneration, catalyst reuse, catalyst replacement, and system optimization strategies are provided.

Laboratory Testing

CORMETECH has several state-of-the-art facilities utilizing multiple pilot, bench and micro reactors as well as XRF, BET, FTIR, ICP and other apparatus and analytical techniques. The labs provide a range of testing capabilities including catalyst activity, SO₂/SO₃ conversion, Mercury (Hg) oxidation, CO & VOC oxidation, pressure loss, chemical composition and physical properties to optimize the catalyst management decision and planning process.

Engineering

CORMETECH engineering services are tailored to assist you with your specific needs in the areas of asset management and optimization. Additional services include system performance evaluations, design of ammonia system storage and handling, SCR and SNCR design, CFD modeling, Large Particle Ash screens and on-line cleaning equipment solutions.





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