

Camet[®] ST

Sulfur-tolerant CO Oxidation Catalyst

When compared to conventional CO (carbon monoxide) catalysts, Camet ST provides higher sulfur tolerance and excellent stability.

BASF's Clean Air Business has been serving the power generation industry for more than 30 years with over 850 units operating or under construction. BASF customers value our experience and technical expertise as the premier supplier of oxidation catalyst solutions to the power generation industry.

Our breadth of experience encompasses virtually every make, model and turbine configuration. Our R&D, application and project engineering expertise ensures maximum performance for both new source applications and replacement catalyst for existing applications.

Our newest innovation is the Camet ST Sulfur-Tolerant Oxidation Catalyst which significantly improves the ability of oxidation catalyst for gas-fired power generation systems to withstand sulfur contamination seen in natural gas supplies.

Camet ST builds off the global leading technology used in the standard Camet oxidation catalyst technology, but improves the ability of the catalyst to perform in the presence of most forms of sulfur contamination.

Applications

Wherever power plants have up to 40 ppm of sulfur species in their fuel, Camet ST is an excellent oxidation catalyst.

Camet ST can perform with sulfur levels up to 2.4 gr/100 ft³ in the gas stream, over 6 times the normal level of sulfur in natural gas pipelines today, while continuing to meet high levels of CO oxidation.

Target Properties

Product use	Sulfur-tolerant CO oxidation for power generation
Substrate	Metal foil
Typical CPSI	105 - 300
Typical pressure drop (WC)	0.5 - 3.0
Typical CO design conversion (%)	90 - 98
Washable	Yes
Maximum use temperature (°F)	1,200
Typical operating temperature (°F)	600 - 900
Maximum sulfur tolerance (gr/100 ft ³)	2.4

About us

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success.

BASF - We create chemistry

Case Study

Problem: A major U.S. natural gas utility utilized a competitive CO oxidation catalyst for converting carbon monoxide (CO) emissions from two GE 7EA turbines. Upon start-up, the CO catalyst did not meet the performance guarantee. The utility has an issue with high inlet sulfur content.

Combined cycle	>300 MW (net)
Turbine flowrate (lbs./hr)	3,000,000
CO inlet, ppmvd @ 15% O ₂	25.0
CO outlet, ppmvd @ 15% O ₂	1.2
Outlet temp. (°F)	850
Pressure drop (in. WC)	2.7
Sulfur inlet, gr/100 ft ³	2.4

Action: The utility, through a third-party catalyst consulting and testing firm, reached out to BASF for a solution. A detailed, on-site evaluation of the process was done, including trialing Camet ST Sulfur-Tolerant Oxidation Catalyst replacement system (CO catalyst modules; gaskets) in the existing framework for a six-month period. The CO emissions remained stable for a year whereas the previous catalyst continually degraded, as demonstrated by the evaluation of test buttons shown in the chart to the right.

Result: After the trial, the utility installed Camet ST. It has now been running successfully for over 20,000 hours.

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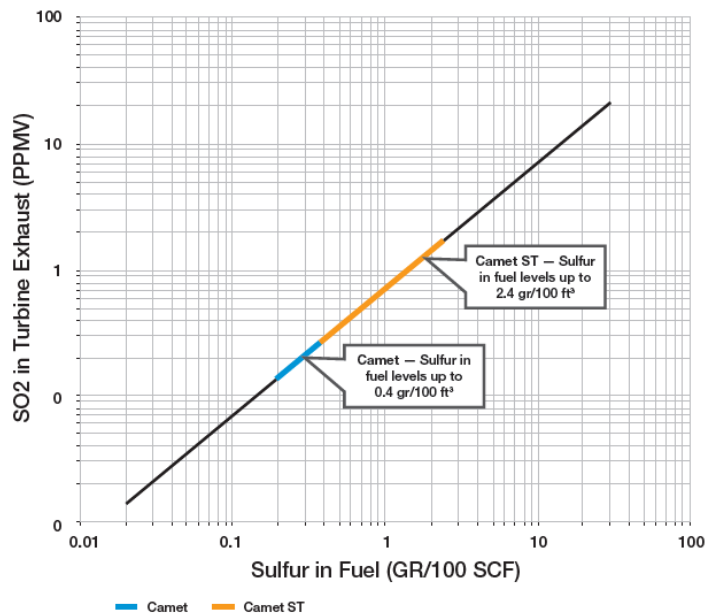
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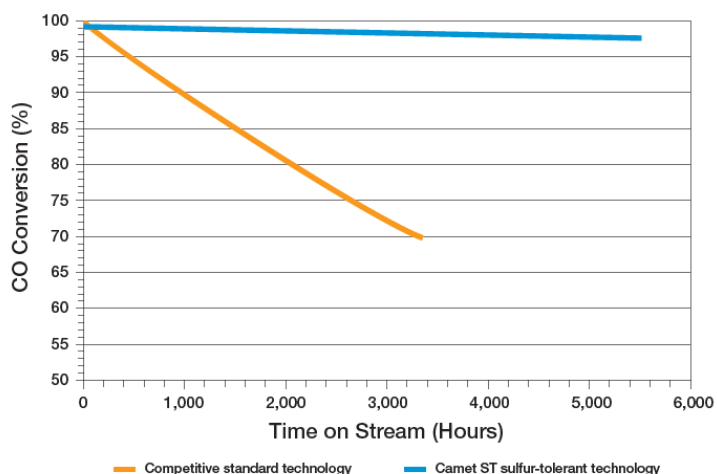
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Camet ST Sulfur-Tolerant Oxidation Catalyst



Camet ST Sulfur-Tolerant Oxidation Catalyst vs. Competitive Standard Technology Full-Scale Field Demonstration – 550 °F



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