



TripleCat™ DNX-LT For refinery heaters

Innovative catalyst technology that saves both energy and money

Umicore combines state-of-the-art edge-surface chemistry with enhanced physical properties to improve SCR catalyst efficiency at low temperatures.

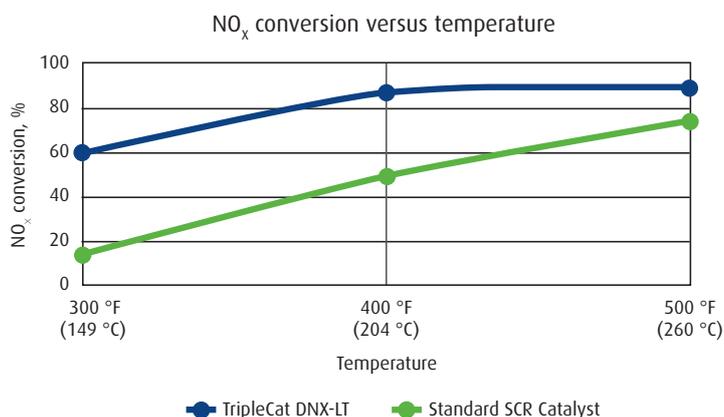
To meet industry demands for an SCR DeNO_x catalyst able to work at very low temperatures, thus saving energy and costs for reheating flue gas, Umicore now introduces TripleCat™ DNX-LT – a further development of the well-known DNX® 10 Series of low-temperature SCR catalyst from Umicore.

TripleCat™ DNX-LT catalyst is a result of several years of R&D activities. With innovative production methods and improved surface chemistry, Umicore is making it possible to increase SCR catalyst performance significantly at temperatures as low as 150°C/300°F.

Because TripleCat™ DNX-LT is a high-activity, monolithic SCR catalyst, it requires significantly less volume than standard SCR catalyst when utilized in most applications. This makes TripleCat™ DNX-LT the ideal choice for existing low-temperature SCR DeNO_x reactors, as well as for new installations where the footprint of the catalyst needs to be minimal.

Game changing performance minimizes energy consumption while higher SCR efficiency lowers operating costs.

TripleCat™ DNX-LT works harder from the start



Sulfur resistance

The performance and lifetime of the TripleCat™ DNX-LT catalyst is unaffected by sulfur in the flue gas. However, in high-sulfur environments, the inevitable reaction of ammonia (NH₃) and sulfur trioxide (SO₃) at low temperatures will lead to the gradual accumulation of ammonium bisulfate (NH₄HSO₄) in the catalyst. This salt will require regular removal by heating the catalyst, according to the same procedure as for the standard SCR catalyst.



Benefits summary

- TripleCat™ DNX-LT requires less catalyst for NO_x removal than traditional SCR DeNO_x catalyst.
- Smaller, more cost effective SCR reactors can be specified when using TripleCat™ DNX-LT.
- Opportunity to greatly reduce or eliminate energy needed for reheating flue gas to get optimal DeNO_x reaction as TripleCat™ DNX-LT works at lower temperatures.
- TripleCat's™ DNX-LT monolithic structure and advanced surface chemistry achieves higher catalytic activity and lower pressure drop than pellet-type SCR catalyst.