

DNX[®]

SCR catalysts

For refinery applications

Improve catalyst lifetime and flexibility

Increased poison resistance to ensure extended lifetimes and turnaround flexibility

Refinery units face unique challenges that can lead to premature catalyst deactivation. The Umicore DNX[®] series of SCR catalysts has a unique tri-modal pore structure that helps maintain the desired DeNO_x activity.

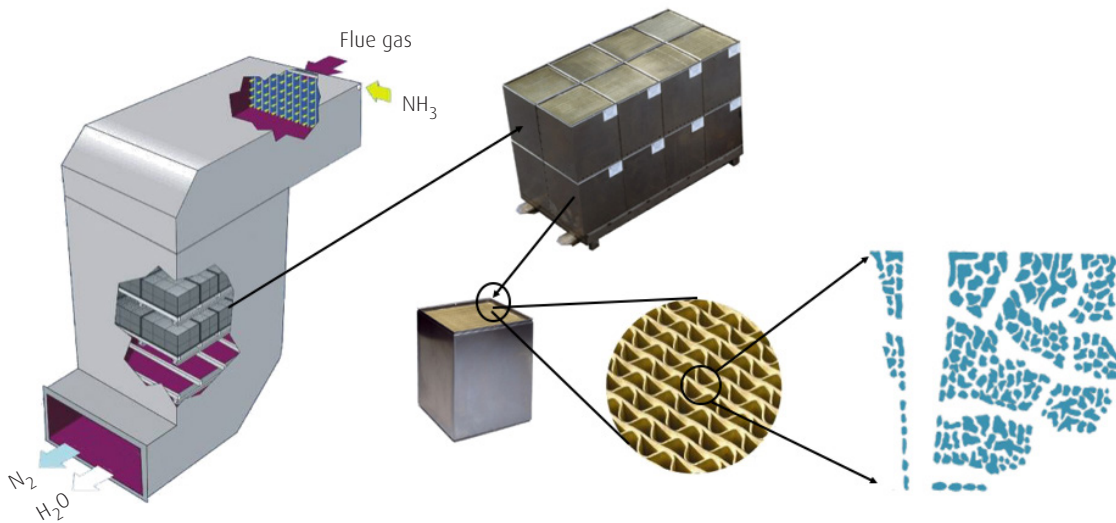
Umicore's vast experience with refinery units ensures that the catalyst design will easily match your turnaround schedule and surpass the required emission reduction limits.

Case: Midwestern refinery modernization

This large refinery chose to pursue a variety of modernization projects completed in 2019 including significant investment in emission reduction. Umicore worked with several different system suppliers to supply SCR catalyst for heaters, a reformer, and a cogeneration unit. Each design was customized for particular challenges expected for that unit. Over the past 20 years, this refinery has reduced its emission levels by around 70 percent.

Case: EMEA based SMR unit

Umicore helped a HyCO plant optimize catalyst consumption during a major turnaround. After testing a catalyst sample and reviewing plant specific operating data, Umicore recommended to replace only 50 percent of the existing catalyst volume. Combined with the 50 percent catalyst volume that was already installed in the unit, the new catalyst is expected to provide sufficient activity for the plant to operate until the next major turnaround without any issues.



Umicore has more than 3,000 global references covering a wide range of different refinery units. Previously part of Haldor Topsøe, the stationary catalyst group was acquired by Umicore in 2017. As part of Umicore, there continues to be focused investment into research and development of new, higher-performing catalyst formulations.



Benefits

- Possible to operate in excess of 80,000 hours per catalyst charge
- Catalyst design tailored to each plant and turnaround period
- Documented operating experience worldwide
- Demonstrated resistance towards poisons typical for refinery and chemical units