

DNX[®]

GTC catalyst

For SCR and CO oxidation

Dual-function emissions control

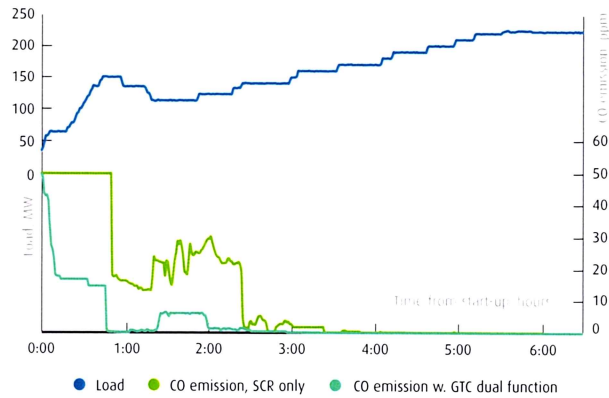
Meet NO_x and CO limits while streamlining plant design

New restrictions on CO emissions and even tougher limits on NO_x emissions require potentially costly changes at gas turbine plants – unless using the DNX[®] GTC catalyst to remove CO and NO_x with a single catalyst.

The DNX[®] GT-series of catalysts is well known for its high SCR activity and low pressure drop, thanks to a very large specific surface area and higher catalyst wall utilization. The DNX[®] GTC catalyst adds CO and VOC oxidation, helping to comply with a wider range of emission limits and save on a streamlined plant design.

Money-saving plant design

The DNX® GTC catalyst enables the addition of CO removal to the HRSG by simply replacing existing SCR DeNOx catalyst with the GTC. This “DeNOx plus CO” option will allow users to reduce the length of the HRSG – saving as much as USD 1 million on capital outlays. The setup can reduce total pressure drop by 25% and required catalyst volumes by 40% compared to a conventional arrangement with separate SCR and CO units.



CO emissions during start-up of a gas turbine before and after replacement of an SCR-only catalyst with the DNX® GTC dual-function catalyst

Low SO₃ levels minimize risk of ammonia salts build-up

Used downstream of any existing SCR DeNOx catalyst, the DNX® GTC adds CO oxidation and eliminates excess ammonia slip from SCR system along with the rest of the NOx in the flue gas. It also limits SO₂ to SO₃ oxidation to levels 4 to 5 times lower than ordinary CO catalysts can achieve. The resulting low levels of SO₃ downstream reduces the risk of ammonia salts build-up on the HRSG backend.

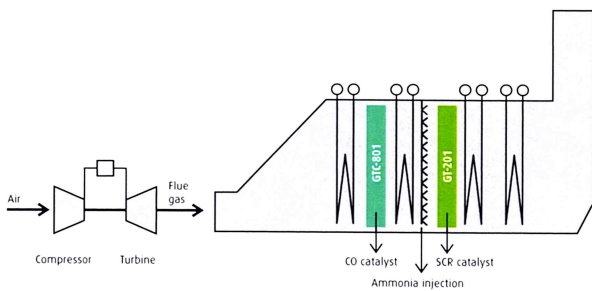


Figure 1: Traditional design

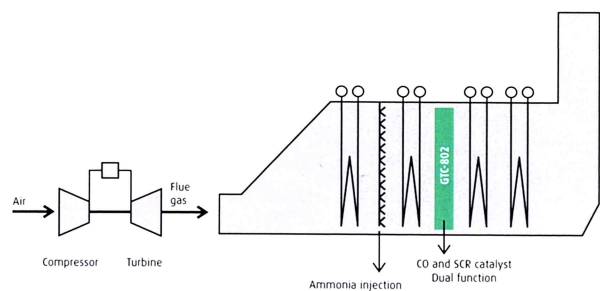


Figure 2: Optimal design; one layer of GTC 802 dual function catalyst, minimum back pressure, NH₃ slip and cost



Benefits

- High activity and low pressure drop
- Unites SCR DeNOx and CO oxidation in one catalyst
- Saves space in the HRSG
- Unique sulfur tolerance
- 4 to 5 times lower SO₂ oxidation than any other CO oxidation catalyst
- Easy installation thanks to self-supporting module design