DAS
Environmental Experts.

TSUGA

Catalytic System

TSUGA – Bay Solution with Multifunctionality

TSUGA is the stand-alone bay solution for post combustion waste gas treatment for NO_x in the semiconductor industry.

DAS EE's Catalytic Systems represent an advanced solution for the semiconductor industry, offering superior performance in exhaust aftertreatment by harnessing the power of Selective Catalytic Reduction (SCR) with ammonia for DeNOx and fine dust removal through a highly effective membrane filter. The Catalytic System ensures exceptional reduction efficiency with minimal energy consumption by recovery of more than 75% of the process heat. With the advanced, reliable, and environmentally friendly solution, you can stay ahead of environmental regulations and achieve your sustainability goals.

Application

› Secondary abatement after NOx generating abatement systems, e. g. Burn-Wet Systems

Goals

› High NO_x reduction efficiency and low NH_3 slip to facilities
› High dust removal efficiency
› High capacity
› High underpressure stability
› No impact on upstream abatement systems
› High energy efficiency

Basic Features

› SCR (Selective Catalytic Reduction) with Ammonia
› Membrane Filter (Surface Filtration)

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Technical Data

	TSUGA
Dimensions (W x D x H)	1980 mm x 1200 mm x 1940 mm
Maintenance area	Front side
SCR-Reactor with Catalyst	High volume flow capacity up to 5000 slm
Particle Filter	PM2.5, PM10, total dust fraction: up to 99.9%

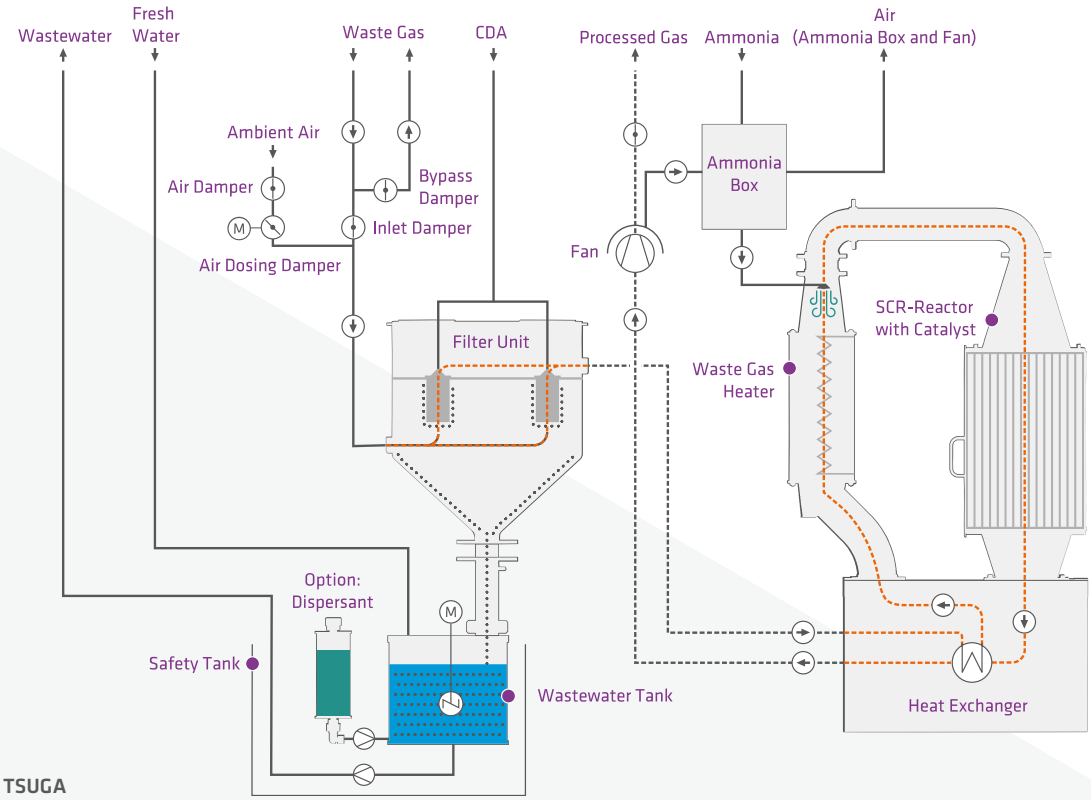
DeNOx: SCR (Selective Catalytic Reduction) with Ammonia

› High reduction efficiency regardless NO_x source: up to 95% *
› Low NH_3 slip: <10 ppm by precise control of the dosed reducing agent *
› Flexible solution for NO and NO_2 in broad concentration ranges up to 4000 ppm at total volume flow of up to 5000 slm
› Low energy demand: low temperature process and energy recovery by heat exchanger

* Tradeoff between NO_x DRE and NH_3 slip: Increase of DRE will result in increase of slip and vice versa.

DeDust: Membrane Filter (Surface Filtration)

› Necessary pre-treatment for catalyst
› High reduction efficiency of PM2.5, PM10, total dust fraction (up to 99.9%)
› Applicable for typical post-combustion PM pollutants



Operation Principle **TSUGA**