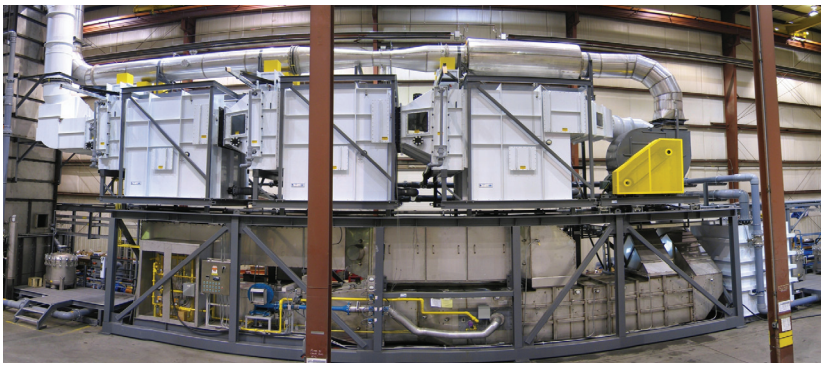
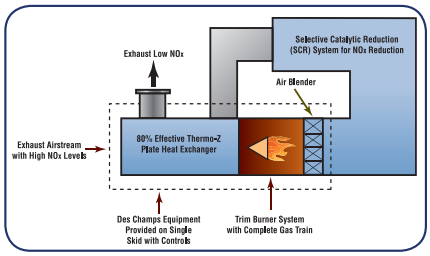
CASE STUDY:
Selective Catalytic Reduction

Munters designs unique SCR energy recovery system



Munters was asked to design a compact, highly efficient heat exchanger and burner package that would work with a Selective Catalytic Reduction (SCR) system for the reduction of nitrogen oxides (NOx). The heat exchanger was required to be capable of handling widely varying system air flow rates and needed to operate using either natural gas or propane.



The proper solution for this application was Munters' Thermo-Z™ plate heat exchanger packaged with a burner and mixing system. The heat exchanger would take the hot exhaust from the SCR system and use it to preheat the incoming airstream, recovering 80%+ of the energy going up the stack. The preheated air was then fed to a burner system to heat the air further to a required preheat temperature prior to entering the SCR system. To account for the widely varying airflow rates and to ensure that the air was mixed adequately, Munters employed a number of special design techniques, including an air mixer at the outlet of the system. The burner system utilized a Maxon Crossfire burner, which was capable of operating using natural gas or propane, along with an IRI gas train using Maxon valves, and a complete flame safety and controls system. The system was completely skid mounted, with a single point power connection to allow for easy field installation. Munters worked closely with the customer and SCR manufacturer to ensure that the systems interfaced properly and were as compact as possible. With the growing concerns over NOx emission levels and increased EPA and state regulations, Munters is well positioned to provide a complete line of services ranging from stand-alone heat exchangers to complete integrated packages.

BENEFITS

- Packaged custom system
- Recovers 80% discharged energy
- Decreased NOx emission levels

Munters Corporation
Tel: (800) 843-5360
E-mail: dhinfo@munters.com
www.munters.us

Munters