

De-Nox Technologies, LLC

UREA TO AMMONIA SYSTEMS

UREA-TO-AMMONIA SYSTEMS

SMALL SCALE SCR

**PATENT PENDING TECHNOLOGY,
SCHEDULED FOR PUBLICATION
IN 2003**

**CONTROLLED, DIRECT, APPLICATION
OF STEAM TO HYDRATE UREA
TO AMMONIA GAS FOR USE
WITH SCR, SNCR, AND FLUE GAS
CONDITIONING**

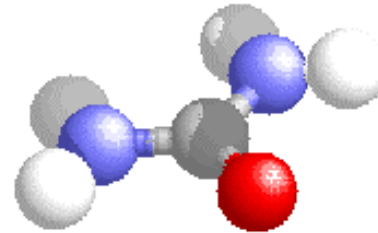
**RETROFIT TO EXISTING REACTORS
OR STAND-ALONE SYSTEM**

**LOWER CAPITAL COST AND SIMILAR
ENERGY COST TO REACTOR -
BASED SYSTEMS**

**SIMPLER SYSTEM WITH RAPID
RESPONSE TIME**

CAPITAL COST \$5 – 20 PER KW

**OPERATING COST 2 kW-hr PER LB
AMMONIA**



COMMON REACTOR PROBLEMS

GAS SIDE SHELL CORROSION

LIQUID DENSITY CONTROL

AIG PLUGGING

CATALYST FOULING

HIGH CAPITAL EXPENSE

BLOWDOWN

**DIRECT UREA INJECTION, AND
CONVERSION TO AMMONIA, UPSTREAM
OF THE CATALYST**

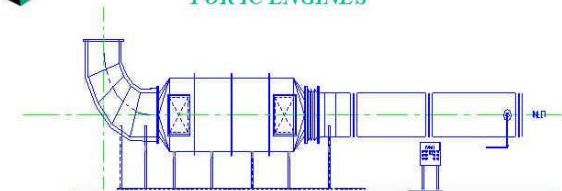
**IC ENGINES, NITRIC ACID PLANTS,
PROCESS HEATERS, SIMPLE CYCLES,
STEAM GENERATORS**

**MODULAR CONSTRUCTION WITH
CONTROLS. MINIMAL FIELD WORK AND
INTERCONNECTIONS**

MAXIMUM NOX REDUCTION



**MODULAR UREA-BASED SCR UNIT
FOR IC ENGINES**



**Guaranteed 90% NOX Reduction
3 Year Catalyst Guarantee
Cost Competitive**

WWW.DE-NOX.COM