

Reinhold Environmental Ltd.



***2007 APC Round Table & Expo
Presentation***

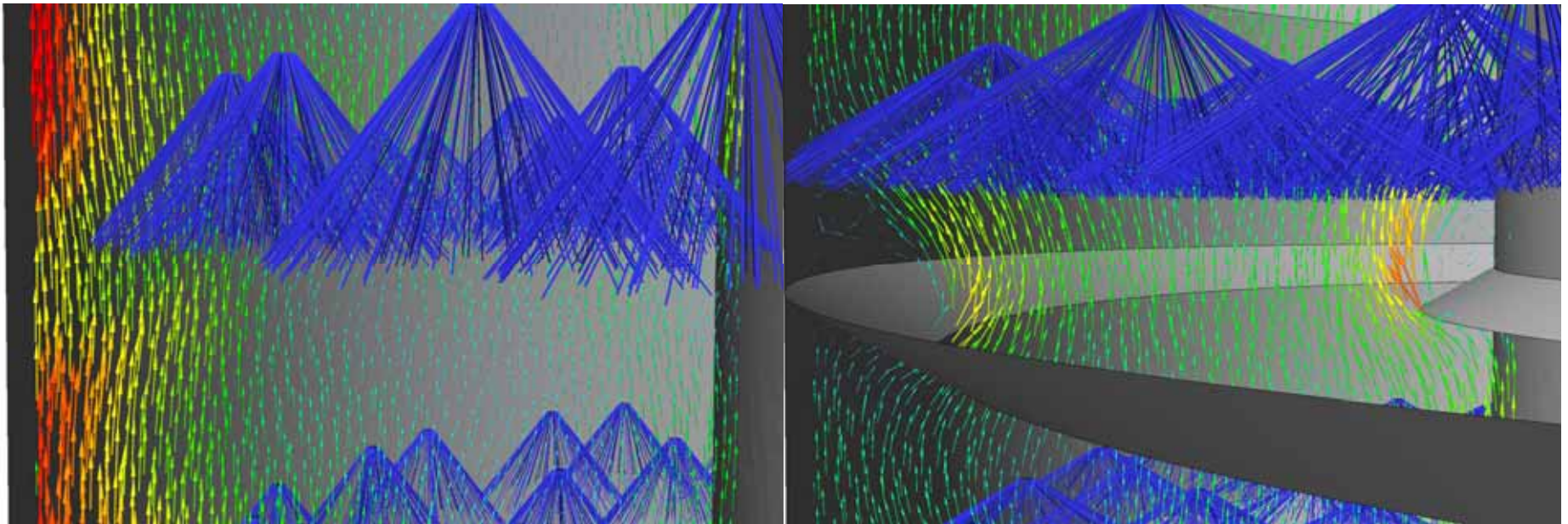
***July 8-10, 2007
Chattanooga, TN
Hosted by TVA***

Upgrades of Older FGD Systems

- Tools available
 - Counter-flow sieve trays
 - Improved spray header design
 - Liquid distribution rings
 - Improved spray nozzle design
- Current upgrade technologies can increase removal efficiencies of older scrubbers to new scrubber design ranges (97%+)

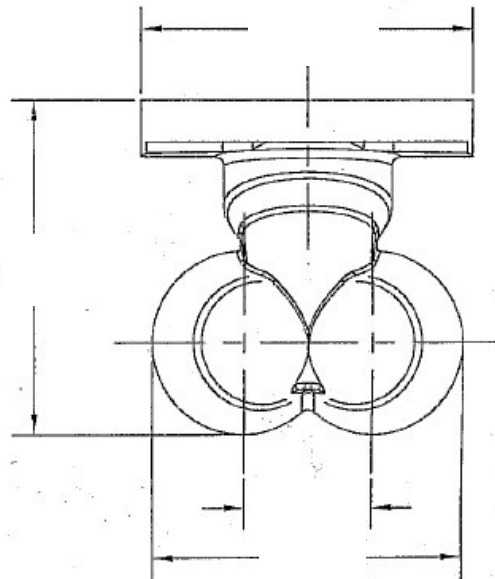
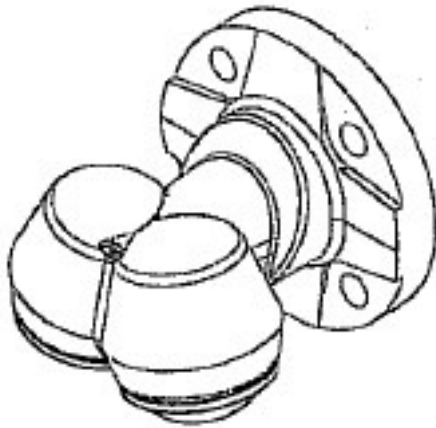
Liquid Distribution Rings (LDR)

- Purpose:
 - Reduce or eliminate wall sneakage
 - Enhance gas-liquid contact



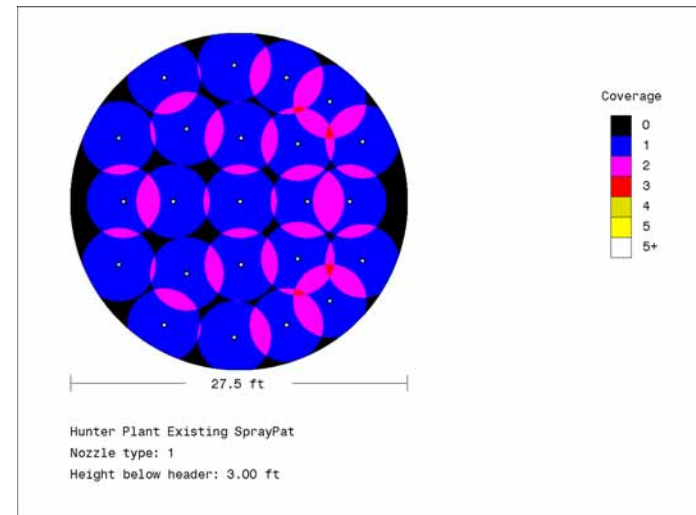
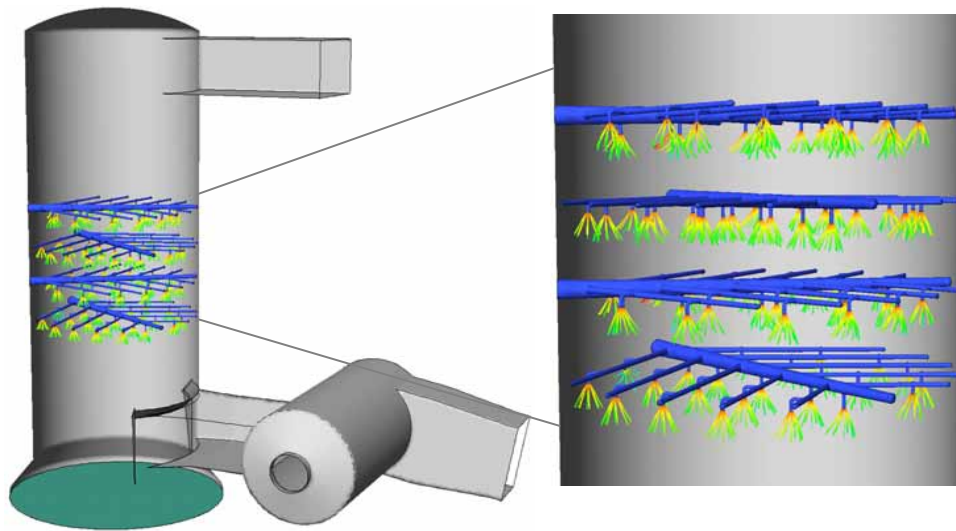
Improved Spray Nozzles

- Double hollow cones (side-by-side, or up-and-down)
- Enhance removal through droplet-droplet interactions resulting in increased surface area (secondary atomization)



Case Study - Before

- Poor spray coverage
- Removal 88 to 90%



Case Study - After

- Improved header design – good spray coverage
- Liquid distribution rings
- Removal efficiency – 97%+

