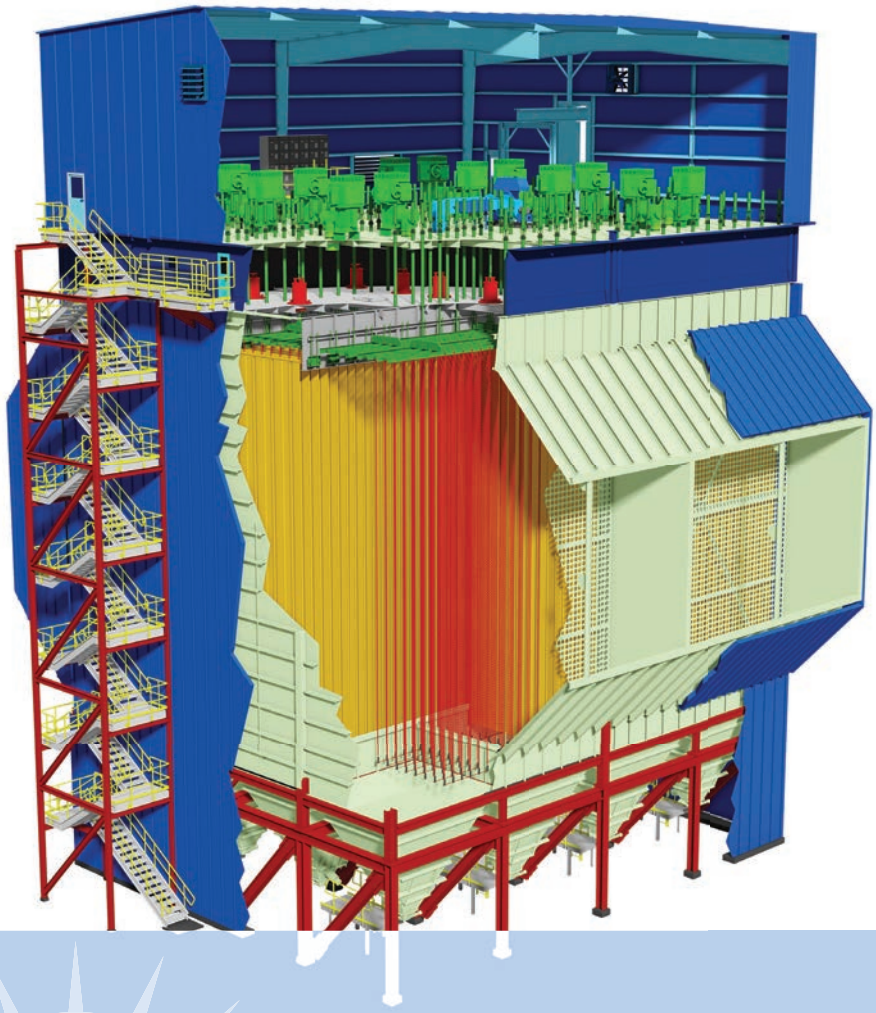
State-of-the-Art Electrostatic Precipitator

[S³] SEI'S SYNERGY SOLUTION

[✓] High Energy

[✓] High Efficiency



EXPERIENCE CLEAN AIR

SOUTHERN *environmental* INC.

DRY ELECTROSTATIC PRECIPITATORS

2 - 700 MW Coal Fired Units - ESP

3.75 MM LB/Day of Solids - Recovery Boiler

3 - 800 MW Coal Fired Units - ESP

15,000 Barrels Per Day FCCU - ESP

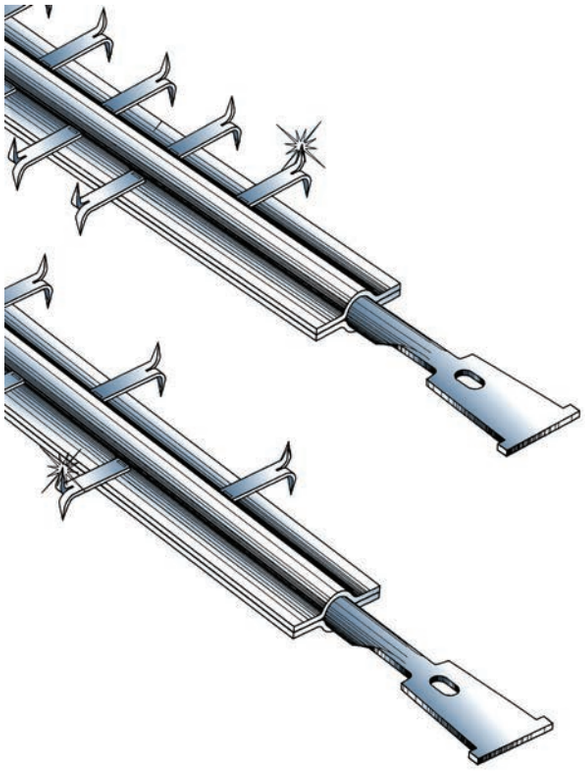
Features:

- Energy Efficient High Frequency Power Supplies
- SEI Elex Discharge Electrodes
- One-Piece or Segmented Collecting Electrodes
- Programmable Electromagnetic Rapping System
- Heated Pressurized Penthouse

SEI Team:

- Custom design utilizing in house electrical, mechanical, structural, civil and chemical engineering
- Manufacturing in Pensacola, Florida on 10-acre campus
- Merit Shop Construction

SEI ELEX DISCHARGE ELECTRODES



Staggered Versus Opposed Pin Design

SEI ELEX Discharge Electrodes are virtually unbreakable and not subject to electrical erosion or mechanical wear - the principal causes of discharge electrode failure.

Improved Cleaning Effect
The vibrations set up by the rapping system are transmitted over the entire length of each and every electrode.

Optimum Electrostatic Design
The corona discharge is guaranteed at every point because the points are geometrically disposed throughout the whole effective column of the precipitator. The excellent corona effect ensures optimum charging of particles and a superior constant cleaning efficiency.

No Bending or Distortion
The lower guide frame ensures that the Rigid Electrode will not bend or deform, even when subjected to excessive variations of temperature in the precipitator.

Longest installed electrode is 50 ft.

SEI PERFORMANCE MEANS VALUE

[S³] SEI'S SYNERGY SOLUTION

- ✓ **SWITCH MODE POWER SUPPLY - Allows more efficient power delivery**
- ✓ **SEI'S ELEX ELECTRODE - Distributes corona current more effectively**
- ✓ **WIDE PLATE SPACING - Promotes higher applied voltage and current density**

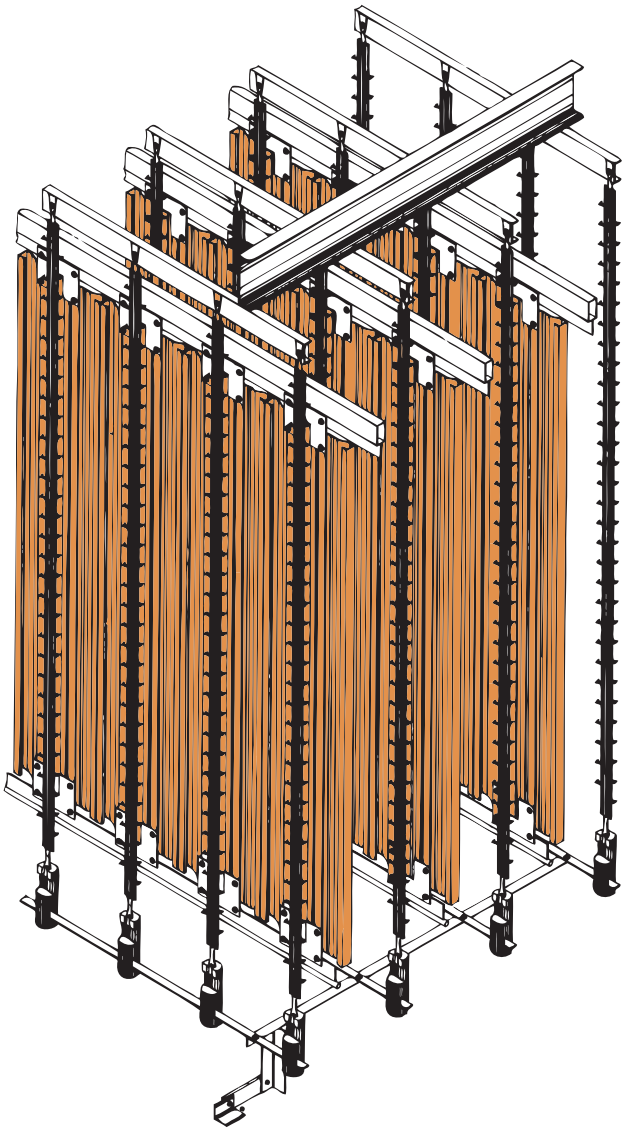
SEI's S³ solutions have achieved .005 lbs/mmBtu and lower outlet emission performance on numerous installations. The S³ technology developed by SEI is able to achieve these low outlet emission levels with equipment collecting area at 70% of the size of other ESP technologies.

"SEI Synergy translates into VALUE for our Customers."

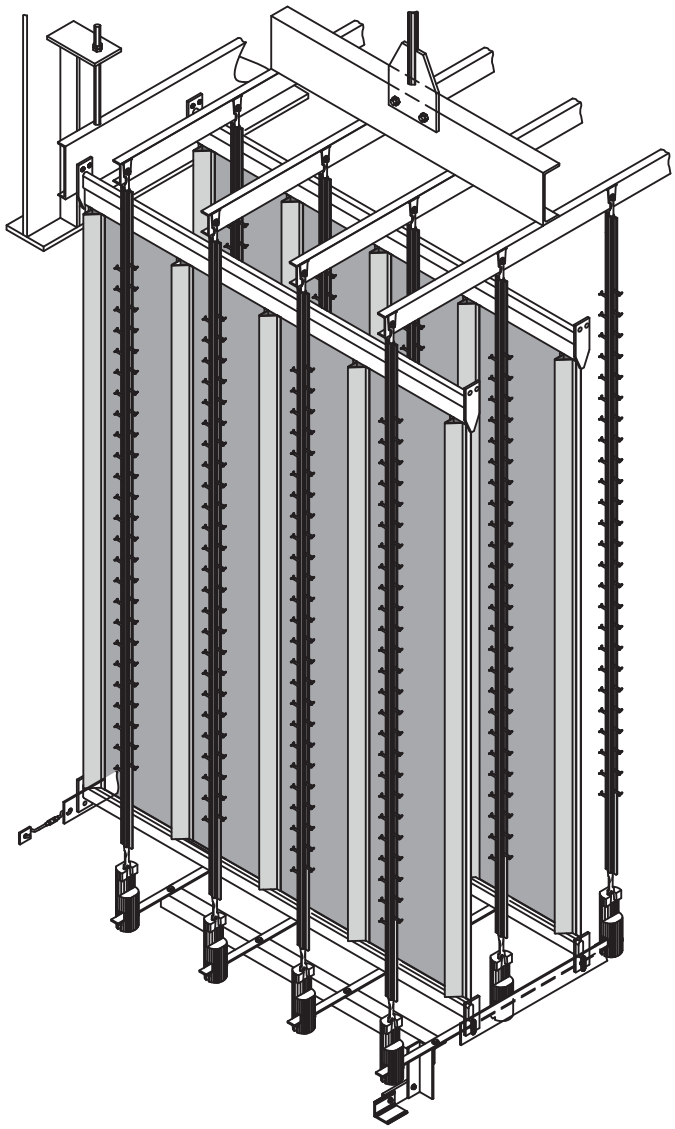
Consider an SEI ESP retrofit or replacement, before you spend massive capital dollars on other options.

SEI COLLECTING PLATES

SEI furnishes both segmented and one-piece collecting plates. Experience has shown that these types of plates are mechanically, structurally and aerodynamically the best plates for a precipitator. Structurally, they stand up well to heavy repeated rapping. Their roll formed designs resist bowing and resultant misalignment due to temperature and rapping. When properly rapped, the collected dust is effectively sheared from the plate over its entire length and falls into the collection hopper with minimum re-entrainment.



SEI Segmented Plate



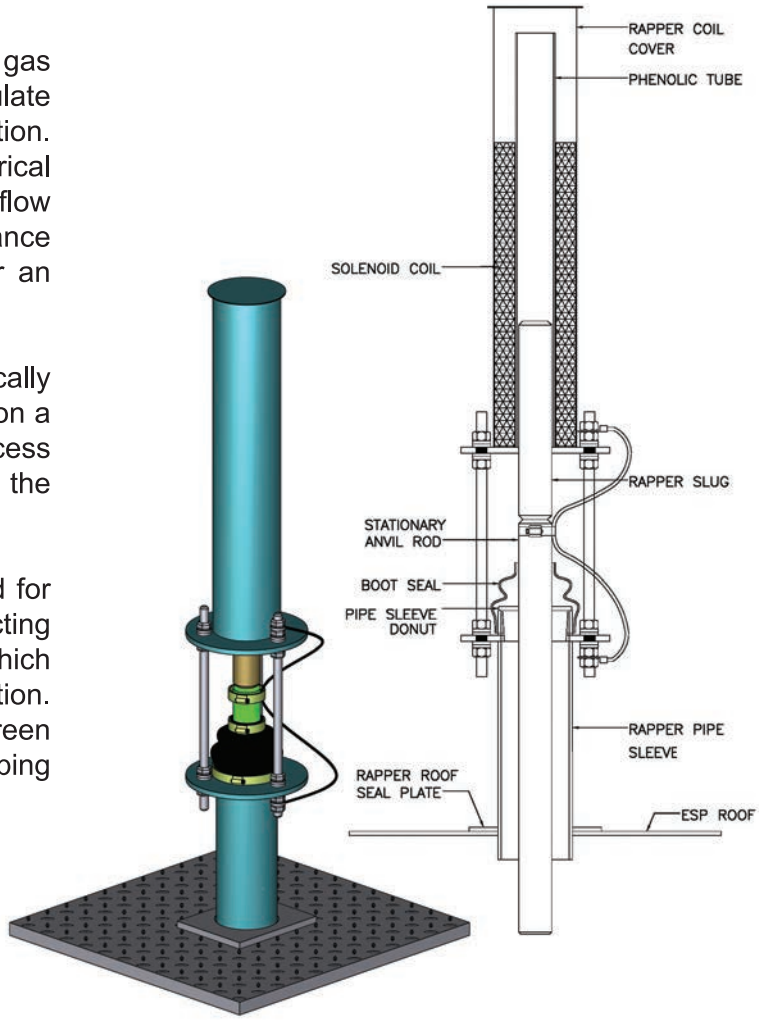
SEI Assembled Plate

ELECTROMAGNETIC RAPPING SYSTEMS

Discharge electrodes, collecting plates and gas distribution devices are subject to particulate build-up during normal precipitator operation. When build-up is allowed to occur, electrical clearances are compromised and distorted air flow patterns develop. Reduced electrical clearance and distorted air flow are primary causes for an ESP losing performance efficiency.

SEI rapper systems have been specifically developed and tested for continuous removal on a wide range of ash types. The key to SEI's success is programmable controlled rapping, utilizing the most durable equipment.

The SEI electromagnetic rapper is engineered for use with rigid discharge electrodes and collecting plates. The coil is epoxy encapsulated which ensures long life and maintenance free operation. The Graphic Rapper Control utilizes a touch screen interface to conveniently set the desired rapping protocol.



Features Include:

- Low rapping ratio design
- Intensity adjustment of individual rappers
- Control of electric impulse type rappers
- Fault detection and annunciation
- Individual rapper control
- Selection of up to five (5) preprogrammed operating modes
- Opacity spike detection correlation
- Auto lift calibration

PARTIAL CLIENT LIST

Utility

- Alabama Power
- Ameren Energy Resource Generating Co
- Associated Electric Cooperative
- Camden County Energy Recovery, NJ
- Duke Energy
- Dynegy Midwest Generation
- Empire District Electric Company
- Georgia Power
- Gulf Power Company
- Hoosier Energy
- Louisville Gas & Electric
- Mississippi Power
- NRG Energy
- Otter Tail Power
- Power South
- RC Cape May Holdings
- Savannah Electric
- Tai & Chyun for China Light & Power
- Tampa Electric
- Vectren Power Supply
- Westar Energy

Pulp & Paper

- Canfor Pulp
- Cascade Pacific Pulp
- Georgia-Pacific
- International Paper
- MeadWestvaco
- Packaging Corporation of America
- Pope & Talbot
- RockTenn
- Smurfit-Stone
- Temple-Inland
- Verso Paper
- Weyerhaeuser

Other

- Chevron
- CITGO Petroleum Corporation
- Climax Molybdenum
- Knauf Insulation
- Buzzi Unicem
- Masonite Corporation

AREAS OF APPLICATION

High Resistivity Particles

- Fly Ash
- Clinker
- Potash

Condensed Particles and Gaseous Pollutants

- Alkali
- Oxides of Sulphur
- Oxides of Nitrogen

Special Processes

- Catalytic Cracking
- Non-Ferrous Metallurgical Fumes
- Combination Fuel Boilers
- Biomass
- Salt Cake
- Lime Kiln

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