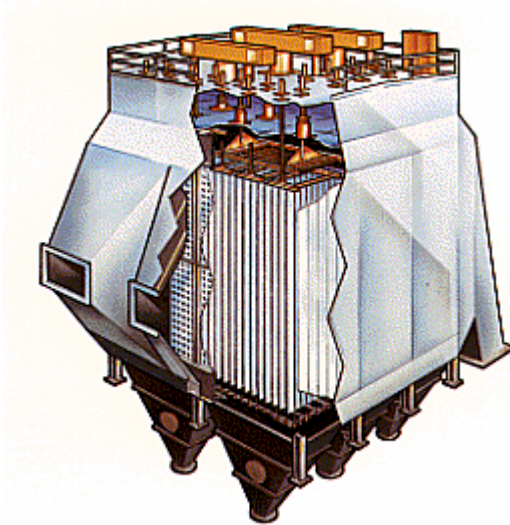
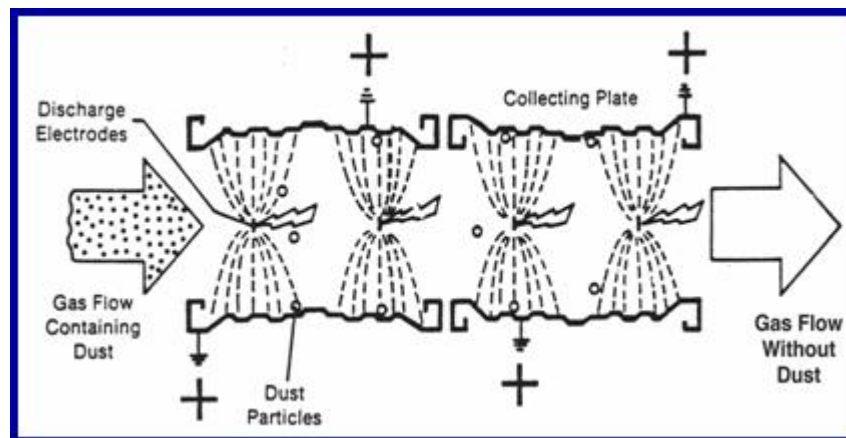


We also undertake ESP trouble shooting and ESP maintenance

ESP Basics - How they work



An electrostatic precipitator (ESP) uses electricity to capture dust particles from a gas stream.



A very high voltage (typically 40,000 to 110,000 Volts) is developed across an air gap between a discharge electrode and a flat metal collecting surface or plate. The process gases (laden with dust) pass between these collecting surfaces and in so doing passes through the highly energised electric field.

The dust particles are then charged negatively by cascading electrons and gas molecules. The strong electrical field then drives the dust to the collecting plates where it's deposited.

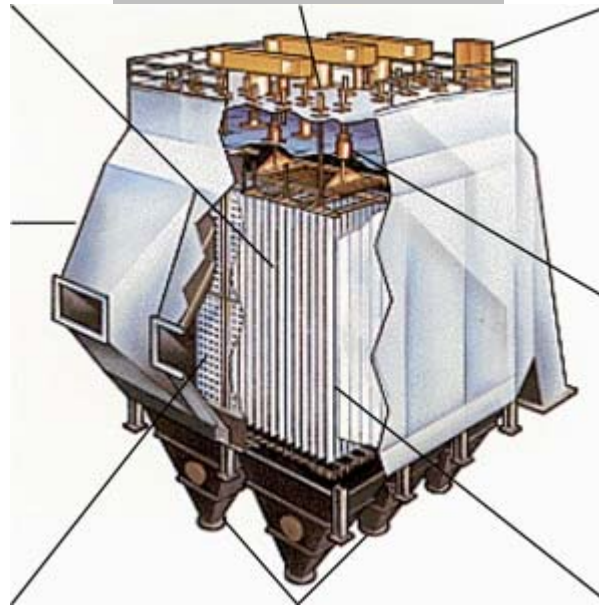
ESP Basics- Identifying different items :

High voltage electrodes
These are generally wires in older systems and rigid posts in modern systems. They provide the High voltage supply between the collecting plates.

Rapper
Either mounted on the roof of the ESP or on the side wall. Rappers are used to dislodge the collected dust from the plates and wires.

Transformer Rectifier (TR set)
Converts the standard AC supply (typ. 415V) to a high voltage (40 to 110 kV) pulsating DC

Inlet Evasé
The inlet evasé spreads the gases and works together with the gas distribution plate to try and slow and evenly distribute the gas.



High voltage support insulator
All of the high voltage system within an ESP are suspended from the roof. Support insulators need to be both structurally strong and capable of withstanding up to 100,000V.

Gas distribution plate
Helps to distribute the gas evenly across the width of the ESP

Hopper
Collects the dust dislodged from the collecting plates and electrodes.

Hopper
Collects the dust dislodged from the collecting plates and electrodes.