- enhanced rapping co-ordinations,
- 10 programs for changing conditions,
- automatic VI curve for analysis,
- energy management via opacity signals,
- network connectivity via CAN bus,
- automatic baud-rate detection of CAN network,
- alarm logging of last 22 alarms,
- communications to DCS or SCADA

The CASTLET touch-screen Keypad and display is designed for ease of use in an industrial environment. The keypad and display unit incorporates both a CPU and a Graphic panel display controller in order to provide complex displays without increasing the processing load on the MCS III controller.

Hopper Level Indicator:

ACEPL Hopper Level Indicator System has been developed to provide a reliable trouble free method of indicating high and/ or low dust levels in ESP hoppers, which operates with the internal gas pressure below ambient.

The principle of operation is by detection of the differential pressure. Under normal conditions, the flap remains closed. When the Hopper is filled with dust upto a certain level, the flap swings open resulting in activation of a proximity switch. The proximity switch sends signal to an electronic control panel to raise an alarm.

Gas Distribution Screen:

Gas Baffles and Distribution Devices (Screens) are used not only to direct the gas through the ESP, but also to ensure that the gas does not go above, below or around the treatment zones. Gas distribution screens are provided at the inlet and outlet if necessary. The Inlet GD Screen is specially designed by ACEPL to enable adjustable flaps for uniform distribution of gas across the cross-section.

Rotary Air Lock:

ESP hoppers need to continuously discharge accumulated dust to the dust evacuation system installed below. In order to avoid ingrace of atmospheric air into the ESP, which is under negative pressure, Rotary Air Lock is used at bottom of each hopper only allowing oneway discharge of dust. A slide gate is fitted between the RAL and hopper bottom for shutting the hopper during RAL maintenance.

Please furnish following details for any enquiry of Electrostatic Precipitator

Gas volume at ESP inlet	(M^3/hr)	Inlet Dust Burden	($gm/M^{3)}$
Temperature at ESP inlet	(^{0}C)	Desired Outlet emission	(mg/NM^3)
Inlet Pressure	(mm WC)	Type of Application (Process/Fuel) / Gas handled	

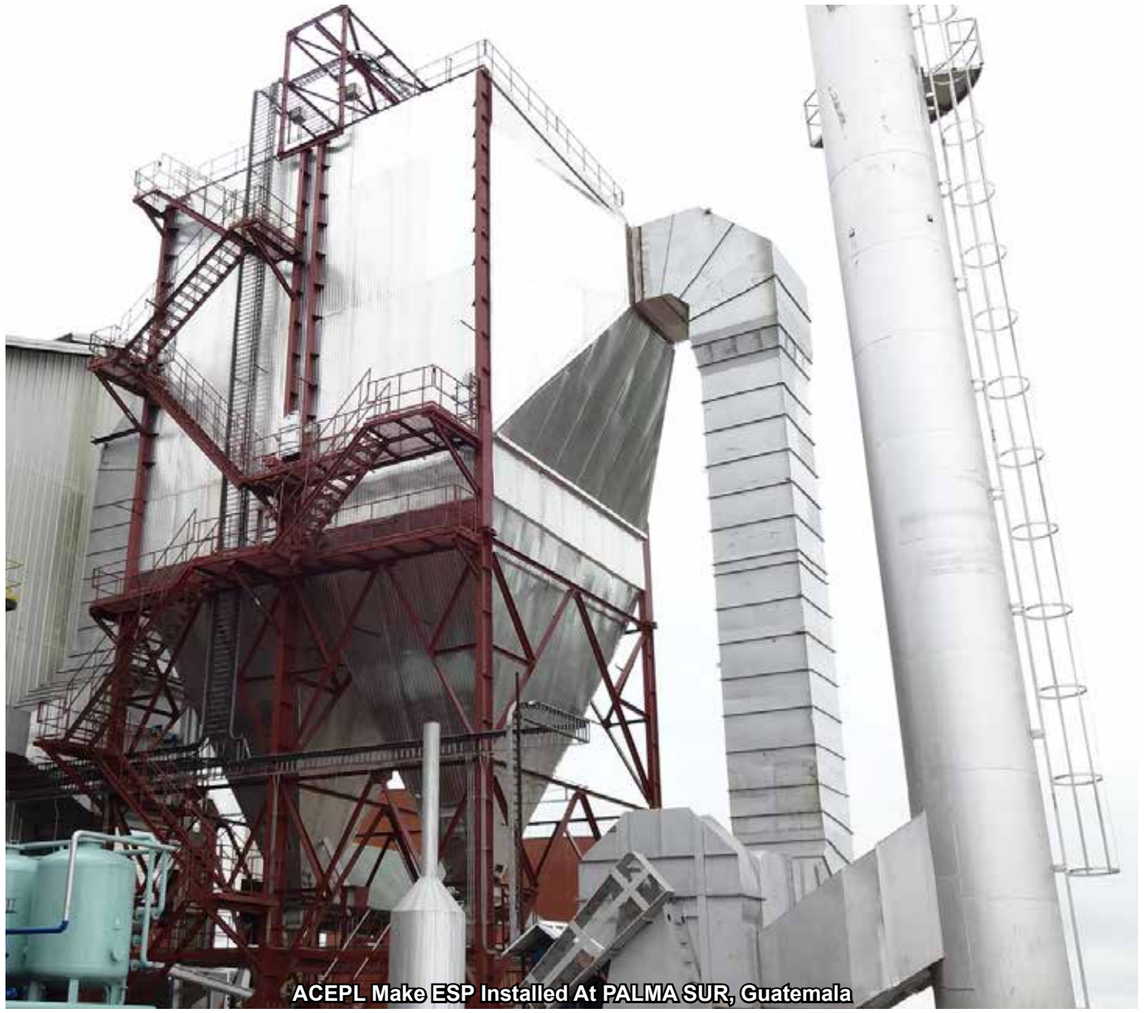
Other Products / *Services*:

Bag Filter, Industrial Fan, Explosion Protection Device (Cage Vent)

Inspection, Supervision of Erection, Testing, Consultancy, Condition Assessment

AIR CONTROL ENGINEERING PVT. LTD.

ELECTROSTATIC PRECIPITATOR



ACEPL Make ESP Installed At PALMA SUR, Guatemala

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Air Control Engineering Private Limited is a professionally managed Pvt. Ltd. Engineering Company. Design, Manufacture, Installation of Air Pollution Control Equipment, Industrial Fan and Cage Vent are the principal lines of business of ACEPL.

Over years ACEPL have developed a large pool of knowledge, experience and high degree of dependability in the specialized area of Air Pollution Control.

With a dedicated group of professionals, ACEPL can offer effective services in the following areas:

- Design, Engineering, Manufacture, Erection, Commissioning & Testing of Electrostatic Precipitators and other air pollution control equipment.
- Renovation, Retrofitting and Up-gradation of Air Pollution Control Equipments especially ESP.

Manufacturing Product Range:

ACEPL manufacture wide range of Air Pollution Control and Air Handling Equipment of which Electro Static Precipitators are widely used equipment.

ElectroStatic Precipitator:

An Electrostatic Precipitator is a device which removes suspended particles from a gas stream. It accomplishes particle separation by use of an electrostatic field which:

- imparts negative charge to dust particles through the corona develeoped by discharge electrodes,
- attracts the dust particles to grounded collecting plates,
- removes the particles from the collecting surface to a hopper by rapping the collecting plates.

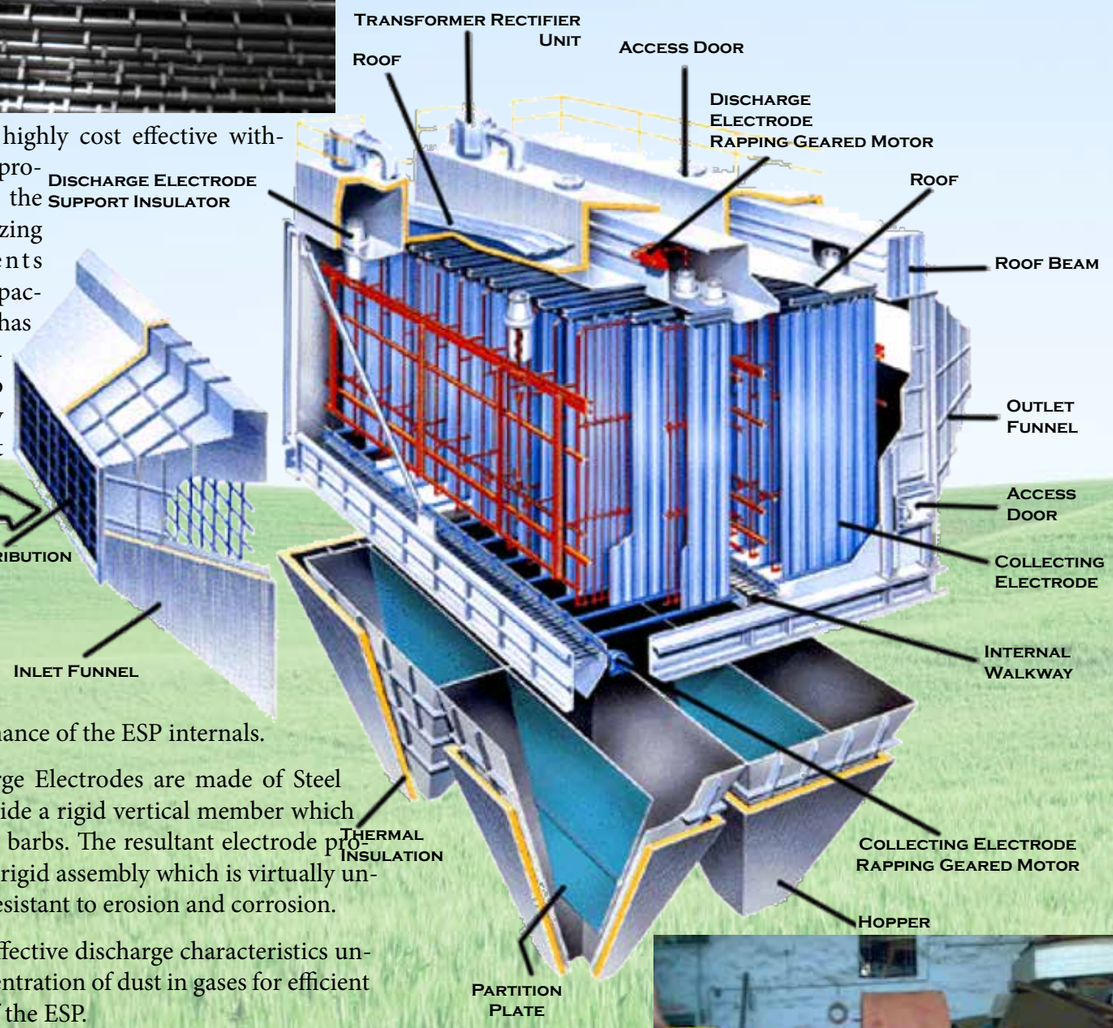
Effectiveness of ESP are directly related to the knowledge, experience and service capability of the professionals responsible for its Design, Manufacture and Services. As a group of highly experienced professionals in this field ACEPL is capable of handling any activity related to Air Pollution Control, specially, Electrostatic Precipitator.

SPECIAL FEATURE OF ACEPL ESP:

Collecting & Discharge Electrodes:

The unique aerodynamic collecting plate configuration is very rigid and has correct geometrical shape to prevent re-entrainment. The advantage of the system is that excellent acceleration, remote from the rapping point is achieved and during rapping all dust is effectively dislodged from the plate giving a virtually clean plate to avoid back ionization and obtain higher efficiency.

To make it highly cost effective without compromising with the technical sizing requirements 400mm spacing design has been adopted. This also helps in easy alignment and maintenance of the ESP internals.



The Discharge Electrodes are made of Steel Pipe to provide a rigid vertical member which have shaped barbs. The resultant electrode provide robust, rigid assembly which is virtually unbreakable, resistant to erosion and corrosion.

They have effective discharge characteristics under all concentration of dust in gases for efficient operation of the ESP.

Rapping Mechanism:

Tumbling Hammer Rapping system gives a fully effective rapping acceleration up to the height of collecting plates and attaining good acceleration. Tumbling Hammers mounted on a rotating shaft provide strong blows at the end of each rapping bar.

The Hammers attached to the shaft, at incremented angles, result in least possible disturbance of dust dislodging function and eliminates possibility of puffing.

Transformer / Rectifier & Controller:

Transformer Rectifier Units provide reliable DC power from an input of LT AC supply. The Silicon diodes combine the transformer, rectifier and LV choke in a single assembly. The internal silicon rectifier results in low maintenance cost, increased reliability and allows higher ambient temperatures and lower cost cooling techniques.

ACEPL is the sole licensee for Indian Sales & Service of CASTLET, UK make Microprocessor based Controllers widely used for Electrostatic Precipitator.
The CASTLET MCS III Automatic Voltage controller is the major component of a system designed to increase both the operational and functional efficiency of Electrostatic Precipitators and associated peripherals. It is CASTLET's 3rd generation controller incorporating latest available technology in both software and hardware algorithms.

It provides many facilities which are unique and gives edge over other available make:

- regupulse mode for best performance under back-corona conditions,
- regupulse coordination to get best performance for all fields,