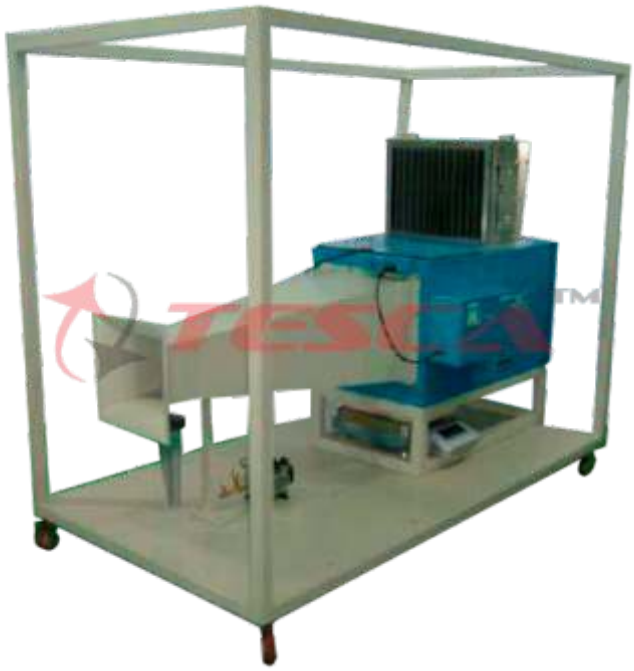

Tesca Electrostatic Precipitator (ESP) Trainer 32471 uses the induced electrostatic charge to remove the particles from the flow air stream. This system is designed to give the students an understanding of the electrostatic precipitator system.
The apparatus comprises of a laboratory scale electrostatic precipitator unit, dust feeding system and a digital weighing meter. A venturi type flow meter is provided to measure the incoming air flow rates. This ESP is a plate type precipitator. It contained of a row of thin wires and followed by a stack of large flat metal plate. The air flow will flow through the thin wires and passes though the metal plate. High negative voltage will applied between the wires and plates. The ESP has a dimension of 600x1000x600mm with a fan. The operating voltage for the ionizer is about 7000 VDC while for collector is about 8500 VDC. Air flow rates can be varied by controlling the fan speed. Dust tank is provided to inject the dust into the system. Digital weighing meter is provided to measure the dust collection by the ESP.

Experiments Capabilities

- Understanding of electrostatic precipitator system
- Demonstration of basic separation
- Effect of input velocity against separation efficiency
- Effect of particle size on separation efficiency
- Effect of input charge (ionization strength) on the separation efficiency

Technical Data

- Experiment Test : Electrostatic Precipitator (ESP) System
- Apparatus Frame : Epoxy coated steel frame
- ESP type : Plate type
- ESP size : 600x1000x600mm
- Fan rating : 1/4hp
- Operating voltage : 7000VDC (ionizer); 8500VDC (collector)
- Air flow meter : Digital anemometer
- Anemometer range : Air velocity: 0 - 3m/s; Temperature: 0 - 65oC
- Dust tank : Plexi-glass container
- Digital weighing meter : 0 - 50kg with 0.5g resolution

Note: Specifications are subject to change.

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