How do Precipitators work (Precipitator #1)

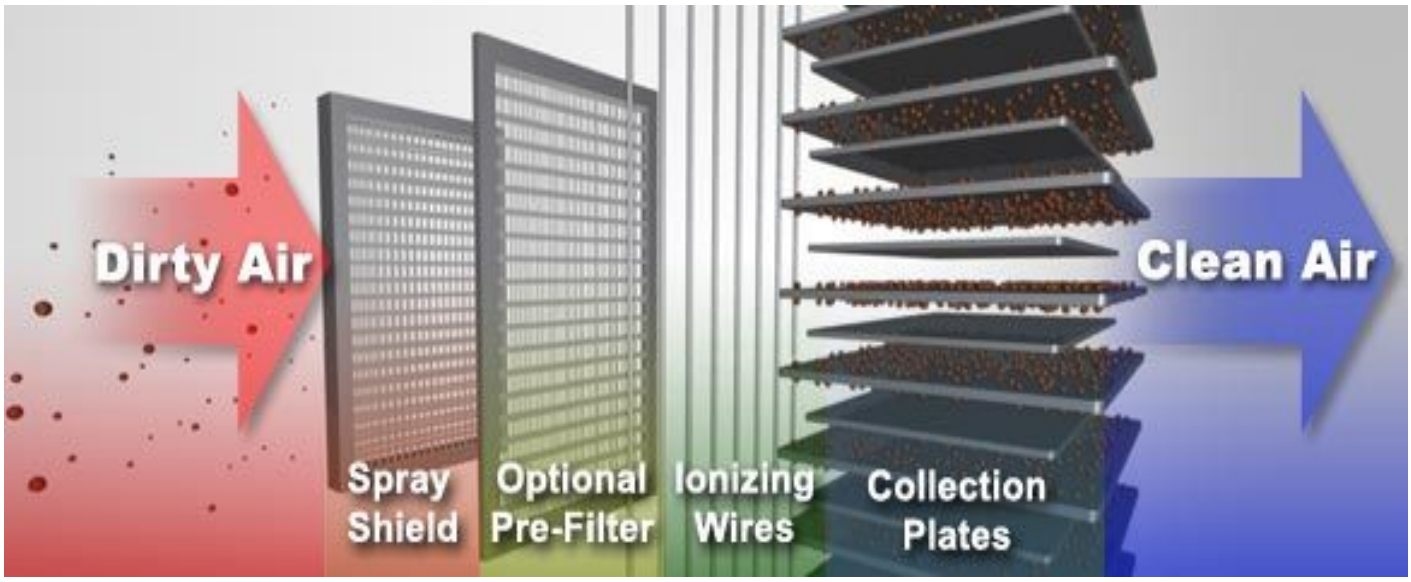
The purpose of the electrostatic precipitator (ESP) is to filter dust collection by using electrostatic charge (static electricity). It is highly-efficient and can remove dust from smoke.

Step 1
First off, contaminated air from factories enters through the filter.

Step 2
The second function in a precipitator is when the dirty air flows through the ionising section. This section contains high voltage negatively charged electrodes (wires) that cause the air flowing through to become negatively charged.

Step 3
These negatively charged dirt particles stick to the positive collection plates, since negative and positive charges attract.

Step 4
Once all the dirt particles attract and stick to the collection plates, clean air comes out of the electrostatic precipitator. The dirt particles are then disposed of in a hopper. With this process, 99% of the remaining (dirt) particles are removed from the original gases or smoke.



https://www.youtube.com/watch?v=AcyFY3iAdlw