

ELECTROSTATIC FILTER (WESP)

Wet Electrostatic Precipitator

Particulate Matter (PM) is emitted from many industrial processes and Wet Electrostatic Precipitators (WESP) is worldwide recognized as the leading technology for an efficient emissions control of sub-micronic particulate matter.

WESP are particularly suited for aggressive media such as hydrochloric acid, ammonia or hydrofluoric acid.



Picture 1: Wet electrostatic Precipitator (WESP)

General Description

Raw gas enters the scrubbing section, there the gas is cooled to saturation and particulate matters larger than 2 microns are removed. The scrubber creates a turbulent layer of fine mist which is used for the mass transfer of toxic gases and the capture of large particles onto the mist droplets.

The turbulent layer provides good particle exchange, efficient gas cooling below adiabatic saturation and good absorption of soluble compounds.

The distributed saturated gas flows upward through the electrostatic section of the WESP. This section is made of parallel configured tubes. With each tube having an ionizing electrode aligned to its center. A high Voltage Transformer generates a strong electrical field between the central discharge electrode and the collecting tube.

The high electrical field ionizes the gas molecules, forming both positive and negative ions.

As the gas-borne particles pass through the inter-electrode space, the larger particles receive an

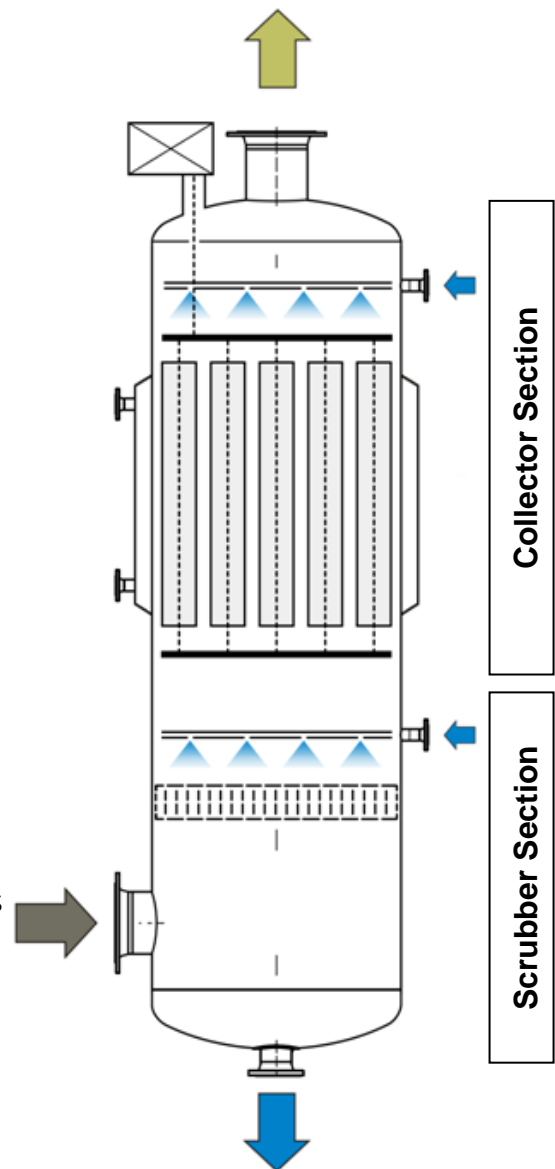
electric charge either by collision with the ions/electrons or by induction charging for the smallest particles. The charged particles then move by the influence of the electric field and migrate to the collecting electrodes, where the charge subsequently leaks away to the ground.

Despite its extraordinarily good separation performance, the WESP manages without any consumables except for a small quantity of water.

Test unit

You have the opportunity to convince yourself of the operation and function of the system. With our WESP test system you can treat a partial flow of your system.

The test plant is equipped with 7 separation tubes and is designed for a volume flow between 1600 m³/h and 2500 m³/h.



Picture 2: Sketch WESP



If you have any questions please do not hesitate to contact us. You can find us on the Internet at www.ALINO-IS.de.

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Certified according to
DIN EN ISO 9001