

Title (en)

APPARATUS FOR CHARGING PARTICLES IN A GAS STREAM AND COLLECTING THE PARTICLES THEREFROM

Publication

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Application

EP 80301590 A 19800515

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Abstract (en)

[origin: EP0019464A1] Apparatus for electrically charging particles in a gas stream comprises an ionizer having at least one plate (19) for connection to one terminal of a high voltage unidirectional current source and a plurality of needles forming at least one corona discharge electrode (21) for connection to the other terminal of said source. For collecting the charged particles, the apparatus includes, downstream of the ionizer, a non-corona deflector electrode (23) for connection to the terminal of the high voltage source having the same polarity as the charge on the particles, and a collecting plate which can be a continuation of plate (19). Preferred embodiments of the invention include circuitry that in combination with the ionizer quenches arcs while maintaining the voltage across the ionizer. A further preferred feature is the inclusion of a wash header by means of which the collecting plate can be continuously irrigated. The apparatus is operated with a voltage gradient in the ionizer of 6KV/cm or higher, and a corona current between the needles and plate (19) having a density of at least 4 ma/m<2>.

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