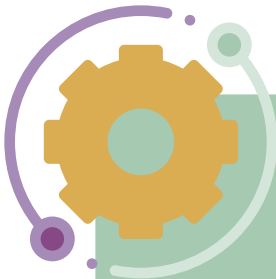




“Air washer for removing volatile organic compounds and microparticles”

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Technology description

This invention relates to a washer that cleans the air of volatile organic compounds and microparticles. The washer consists of a column with a number of perforated discs inside it and of an exhaust fan for sending waste fumes and microparticles to a column reactor. While an aqueous suspension - which may be a mixture of a microporous material, natural zeolite or iron oxide nanoparticles - passes through the spinal discs, the polluted air is injected upstream. Volatile organic compounds and contaminated air microparticles are adsorbed by the aqueous suspension and can be re-used.

Applications, usage and benefits of the technology

Burnt oil vapors, dusts (rubber car tires, truck linings dust, dirt, microorganisms, etc.) and volatile organic compounds (VOCs), contribute significantly to air pollution in cities.

Unlike current air washers, which require a power unit, the prototype developed by the inventor simultaneously extracts and washes contaminated air.

In addition, residues retained as fat burned oil could be reused after treatment, either as a lubricant or for some other application.

Air purification, i.e. removing unwanted contaminants from a gas stream using a liquid to wash unwanted pollutants will become necessary when tighter pollution rules are implemented.



Technology readiness Level

Experimental prototype.

Market information

It is expected that the demand for air purification equipment in the US (business segments and consumers) will grow in the next years. In Mexico, the commercial potential depends on the implementation of tighter rules to combat environmental pollution.

