

Title (en)

METHOD AND DEVICE FOR SEPARATING AND/OR CLEANING AEROSOLS AND SOLID MATERIAL PARTICLES AND FIBERS FROM GAS AND SOLID MATERIAL PARTICLES AND FIBRES FROM FLUIDS BY ACOUSTOPHORESIS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ABSCHIEDUNG UND/ODER REINIGUNG VON AEROSOLEN UND FESTSTOFFPARTIKELN UND -FASERN AUS GASEN SOWIE VON FESTSTOFFPARTIKELN UND -FASERN AUS FLÜSSIGKEITEN DURCH AKUSTOPHORESE

Title (fr)

PROCÉDÉ ET DISPOSITIF DE SÉPARATION ET/OU DE NETTOYAGE D'AÉROSOLS ET DE PARTICULES ET DE FIBRES SOLIDES DE GAZ, AINSI QUE DE PARTICULES ET DE FIBRES SOLIDES DE FLUIDES PAR ACOUSTOPHORESE

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Abstract (en)

[origin: WO2017153038A2] The invention relates to an aggregating device for separating and/or cleaning aerosols and solid material particles and fibres from gas and solid material particles and fibres from fluids by acoustophoresis, comprising I) conveying means selected from the group consisting of a conveyor belt, a liquid pressure, a liquid column and a liquid wave of the fluid, sound waves modulated in the conveying direction, a centrifugal force, a centripetal force, a Coriolis force, gravitation, an injector, a venturi, a diffuser, a liquid multiplier, a gas multiplier, a Dyson, a ducted turbine, a delta wing concentrator, an annular venturi, a magnus effect turbine, a berwian or prussion wind turbine, a passive and active convection, effusion and diffusion, for receiving and/or conveying an aerosol and/or a fluid in the conveying direction into the aggregating device, II) at least one exciter for generating an acoustic sound wave which impinges upon the aerosol and/or the liquid material, and III) means for separating a first material part containing condensed liquids and/or aggregated solid materials from the aerosol and/or the fluid. The invention also relates to the use thereof for carrying out the acoustophoric method.

IPC 8 full level

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