

Title (en)

APPARATUS AND METHOD FOR MANIPULATING PARTICLES IN A LIQUID MEDIUM BY ULTRASONIC WAVES

Title (de)

VORRICHTUNG UND VERFAHREN FÜR DIE BEEINFLUSSUNG VON PARTIKELN IN EINEM FLÜSSIGMEDIUM MITTELS ULTRASCHALLWELLEN

Title (fr)

APPAREIL ET PROCEDE PERMETTANT DE MANIPULER DES PARTICULES DANS UN MILIEU LIQUIDE AU MOYEN D'ONDES ULTRASONIQUES

Publication

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Application

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Abstract (en)

[origin: WO9743026A1] The invention relates to an apparatus and a method for manipulating particles in a liquid medium by ultrasonic waves. A vessel is provided for receiving the particle-carrying liquid, as well as means, such as an ultrasonic transducer for generating an ultrasonic standing wave in the vessel such that particles are attracted to nodal fronts of the standing wave. The standing wave is intermittently suppressed, whilst the particle-carrying liquid is oscillated relative to the transducer. If the oscillation and the intermittency are carried out in synchronisation, the particles can be shepherded from one nodal front to another in a prescribed direction to concentrate them for separation from the liquid medium. The invention has application to separation or concentration of inorganic or organic particulate matter in laboratory or industrial processes.

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Citation (search report)

See references of WO 9743026A1

Cited by

US10946133B2; US10099002B2; US10661005B2; US10166323B2; US11617820B2; US9504780B2; US9731062B2; US9974898B2

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