

Title (en)
DEVICE FOR TRANSFERRING ULTRASONIC ENERGY INTO A LIQUID OR PASTY MEDIUM

Title (de)
GERÄT ZUR EINKOPPLUNG VON ULTRASCHALL IN EIN FLÜSSIGES ODER PASTÖSES MEDIUM

Title (fr)
DISPOSITIF POUR INJECTER DES ULTRASONS DANS UNE SUBSTANCE LIQUIDE OU PATEUSE

Publication
EP 0857088 A1 19980812 (DE)

Application
EP 96934714 A 19961017

Priority
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• EP 9604502 W 19961017

Abstract (en)
[origin: US5994818A] PCT No. PCT/EP96/04502 Sec. 371 Date Jan. 21, 1999 Sec. 102(e) Date Jan. 21, 1999 PCT Filed Oct. 17, 1996 PCT Pub. No. WO97/15404 PCT Pub. Date May 1, 1997A device (10) for transferring ultrasonic energy into a liquid or pasty medium, the device consisting of the following functional elements: a) an AC generator (35) designed for frequencies between 1 kHz and 100 kHz, b) a magnetostrictive or piezoelectric transducer (20) controlled by the output voltage of the AC generator to execute high-frequency (longitudinal) mechanical oscillations, c) a cylindrical waveguide (23) which is excited by the transducer to execute longitudinal resonant oscillations and d) a tubular cavity resonator (24) which is acoustically coupled to the waveguide and which converts the longitudinal resonant oscillations into oscillations transverse to its longitudinal axis (26'), the oscillation energy of the resonator being transferred into the medium (11) which is to be exposed to the ultrasonic energy. The cavity resonator (24) is designed so that the resonance condition is fulfilled for both longitudinal and transverse natural oscillations of its case (36).

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