

Title (en)
METHOD AND DEVICE FOR DETERMINING THE TRANSPORT PARAMETERS OF A PARTICLE TRANSPORTING FLUID FLOWING IN A LINE

Title (de)
VERFAHREN UND VORRICHTUNG ZUM ERMITTELN DER FÖRDERPARAMETER EINES PARTIKEL FÜHRENDEN, DURCH EINE LEITUNG STRÖMENDEN FLUIDUMS

Title (fr)
PROCEDE ET DISPOSITIF POUR DETERMINER LES PARAMETRES DE TRANSPORT D'UN FLUIDE S'ECOULANT DANS UNE CANALISATION ET COMPORTANT DES PARTICULES

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Abstract (en)
[origin: WO2007041735A1] The invention relates to a method and a device for determining the transport parameters of a particle transporting fluid flowing in a line, comprising an electrode arrangement with at least two electrodes, wherein the coupled capacitance between at least two electrodes arranged around the circumferential region of the line is measured and at least the flow speed of recorded particles is determined from the measured values, said measured values are subjected to a fast Fourier transform and a selected number n of obtained frequency components are summated to give a particle speed value. A device for determining the transport parameter of a particle-transporting fluid flowing in a line (LEI) comprises an electrode arrangement arranged in the circumferential region of the line with at least two electrodes (E₁ ... E₈; E_{1a}, E_{1b} ... E_{8a}, E_{8b}/ E_a, E_b, E_o, E_u), a measuring device (CME) for the real-time measurement of the coupled capacitance between the at least two electrodes and an analytical unit (AWE), to which the measured values from the measuring device are supplied. The analytical unit (AWE) subjects the measured values to a fast Fourier transform and a selected number n of the frequency components obtained are subjected to a summation to give a particle speed or density value.

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