

Title (en)
DEVICE FOR MEASURING THE VOLUMETRIC FLOW RATE OF A FLUID

Title (de)
VORRICHTUNG ZUM MESSEN DES VOLUMENSTROMS EINES FLUIDS

Title (fr)
DISPOSITIF DE MESURE DU DÉBIT VOLUMÉTRIQUE D'UN FLUIDE

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Application
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Abstract (en)
[origin: WO2015176891A1] The invention relates to a device for measuring the volumetric flow rate of a fluid (11) flowing through a measurement tube (2) in the direction of the longitudinal axis (3), comprising a coil arrangement (6, 7), at least two measurement electrodes (4, 5) which are coupled to the fluid (11), and a control/analyzing unit (8) which, in connection with the coil arrangement (6, 7), generates a magnetic field (B) that periodically changes the polarity and runs substantially transverse to the longitudinal axis (3) of the measurement tube (2) and which determines the volumetric flow rate of the fluid (11) in the measurement tube (2) during a measurement phase with a substantially constant magnetic field (B) using a voltage induced in the measurement electrodes (4, 5). The control/analyzing unit (8) applies an overvoltage to the coil arrangement (6, 7) during a deceleration phase, and the deceleration phase begins when the polarity of the magnetic field (B) switches and ends when the measurement phase begins. The control/analyzing unit (8) applies a substantially constant holding voltage to the coil arrangement (6, 7) over the duration of the measurement phase, and the control/analyzing unit (8) keeps the ratio of the overvoltage to the holding voltage at a substantially constant value.

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