Title (en)

METHOD FOR DETERMINING THE MASS FLOW THROUGH A CORIOLIS MASS FLOWMETER

Title (de)

VERFAHREN ZUR BESTIMMUNG DES MASSEDURCHFLUSSES EINES CORIOLIS-MASSEDURCHFLUSSMESSERS

Title (fr)

PROCEDE POUR DETERMINER LE DEBIT MASSIQUE D'UN DEBITMETRE MASSIQUE CORIOLIS

Publication

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Application

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Abstract (en)

[origin: WO2006056560A2] The invention relates to a method for determining the mass flow through a Coriolis mass flowmeter, wherein a meter tube is induced to oscillate with the frequency f and the resulting oscillation is detected in two different measuring sites using two oscillation sensors. The analog sensor signals X17, X18 of the two oscillation sensors are converted to digital sensor signals S1 and S2 and are processed in a digital signal processor DSP. In the digital signal processor DSP, the two sensor signals S1 and S2 are used to produce the sum signal S and the differential signal ?. The sum signal is then rotated by 90º. In another process step, the rotated sum signal is multiplied by the differential signal ?. Once the amplitude of the sum signal S is determined, the mass flow is determined using the formula <maths><img></img></maths> ~|Im(?)|/ (|S| f). The inventive method does not require that the two sensor signals S1, S2 have the same amplitudes. It is therefore not necessary to adjust the analog signals X17, X18 to the same amplitude.

IPC 8 full level

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CPC (source: EP US)

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