

Title (en)
METHOD FOR REYNOLDS NUMBER CORRECTION OF A THROUGHFLOW MEASUREMENT OF A CORIOLIS THROUGHFLOW MEASUREMENT UNIT

Title (de)
VERFAHREN ZUR REYNOLDSZAHL-KORREKTUR EINER DURCHFLUSSMESSUNG EINES CORIOLIS-DURCHFLUSSMESSGERÄTS

Title (fr)
PROCÉDÉ DE CORRECTION EN FONCTION DU NOMBRE DE REYNOLDS D'UNE MESURE DE DÉBIT À L'AIDE D'UN DÉBITMÈTRE À EFFET CORIOLIS

Publication
EP 3390984 A1 20181024 (DE)

Application
EP 16795109 A 20161115

Priority
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Abstract (en)
[origin: WO2017102218A1] A method for determining a Reynolds-number-compensated flow speed and/or a Reynolds-number-compensated throughflow (G) through a Coriolis throughflow measurement unit (1), characterized by the following steps: a. Determining at least one meter factor (C) during a calibration time interval in a calibration system (a) on the basis of measurement values (A and B) of the Coriolis throughflow measurement unit (1) and of a piston testing apparatus (2) of the calibration system (a) by means of an evaluation unit (3) of the calibration system (a); b. Transmitting the meter factor (C) from the evaluation unit (3) of the calibration system (a) to an evaluation unit (1a) of the Coriolis throughflow measurement unit (1); c. Assigning a Reynolds number (H) to said meter factor (D) while the Coriolis throughflow measurement unit (1) is connected to the calibration system (a), and storing at least one data set relating to at least one value pair (D) with regard to in each case one Reynolds number and one meter factor in the Coriolis throughflow measurement unit; d. Determining a non-corrected measurement value (E) for a flow speed, and/or determining a throughflow, of a measurement medium (M) at a measurement point (b) and determining the density of the measurement medium (M) at the measurement point (b) and the viscosity of the measurement medium at the measurement point (b); e. Determining a Reynolds number on the basis of the measurement value (E), determined in step d), of the flow speed and/or throughflow and on the basis of the density and the viscosity of the measurement medium (M), and assigning a meter factor (C) associated with said Reynolds number; and f. Correcting the non-corrected measurement value (E) of the flow speed and/or of the throughflow on the basis of the associated meter factor (C), and outputting the Reynolds-number-corrected flow speed and/or the Reynolds-number-corrected throughflow (G); and a Coriolis throughflow measurement unit.

IPC 8 full level
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