

Title (en)

METHOD FOR DETECTING BUBBLES OR DROPLETS OF A FIRST MEDIUM IN A FLUID SECOND MEDIUM FLOWING THROUGH A MEASURING PIPE

Title (de)

VERFAHREN ZUM DETEKTIEREN VON BLASEN ODER TRÖPFCHEN EINES ERSTEN MEDIUMS IN EINEM EIN MESSROHR DURCHSTRÖMENDEN FLUIDEN ZWEITEN MEDIUM

Title (fr)

PROCÉDÉ DE DÉTECTION DE BULLES OU DE GOUTTELETTES D'UN PREMIER MILIEU DANS UN DEUXIÈME MILIEU FLUIDE TRAVERSANT UN TUBE DE MESURE

Publication

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Application

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Abstract (en)

[origin: WO2023030844A1] The invention comprises a method for detecting bubbles (BL) or droplets of a first medium (MD1) in a fluid second medium (MD2) flowing through a measuring pipe (MR), with a first heating element (HE1) being arranged on the measuring pipe (MR) at a first measuring point (MS1), a second heating element (HE2) being arranged on the measuring pipe (MR) at a second measuring point (MS2) and the second measuring point (MS2) being arranged at a distance from the first measuring point (MS1) in the direction of flow (FR), the method comprising: - heating the first heating element (HE1) and the second heating element (HE2) by means of electrical power, - simultaneously sensing the ambient temperature at the first measuring point (MS1) by means of a first temperature sensor (TS1) and the ambient temperature at the second measuring point (MS2) by means of a second temperature sensor (TS2), a first electrical measurement variable (U1) of the first temperature sensor (TS1) being determined to sense the ambient temperature at the first measuring point (MS1) and a second electrical measurement variable (U2) of the second temperature sensor (TS2) being determined to sense the ambient temperature at the second measuring point (MS2), - forming a difference ( $\Delta U$ ) between the first electrical measurement variable (U1) and the second electrical measurement variable (U2), and - comparing the absolute value of the difference ( $\Delta U$ ) with a reference threshold value ( $\Delta U_{Ref}$ ), the presence of a bubble (BL) or droplet being detected if the absolute value of the difference ( $\Delta U$ ) at least briefly exceeds the reference threshold value ( $\Delta U_{Ref}$ ), and the invention comprises a sensor arrangement designed to carry out the method according to the invention.

IPC 8 full level

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