

Title (en)

APPARATUS FOR MEASURING THE VOLUMETRIC OR MASS FLOW RATE OF A MEDIUM IN A PIPELINE

Title (de)

VORRICHTUNG ZUM MESSEN DES VOLUMEN- ODER MASSESTROMS EINES MEDIUMS IN EINER ROHRLEITUNG

Title (fr)

DISPOSITIF DE MESURE DU DÉBIT VOLUMIQUE OU DU DÉBIT MASSIQUE D'UN MILIEU DANS UN CONDUIT

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2008059020A1] The invention relates to an apparatus for measuring the volumetric or mass flow rate of a medium (11) in a pipeline, said apparatus having a measuring tube (2) through which the medium (11) flows in the direction of the longitudinal axis (3) of the measuring tube (2), having a magnetic system (6, 7) which is configured in such a manner that it generates a magnetic field (B) which permeates the measuring tube (2) and runs essentially transverse to the longitudinal axis (3) of the measuring tube (2), having at least one measuring electrode (4, 5) which couples to the medium (11) and is arranged in a hole (27) in the wall of the measuring tube (2) in a region that is essentially perpendicular to the magnetic field (B), wherein the measuring electrode (4; 5) has an elongate electrode shaft (18) with a first widened end region (19) which couples to the medium and is dimensioned in such a manner that its diameter (D) is greater than the diameter (d) of the hole (27) in the wall of the measuring tube (2), in which the measuring electrode (4; 5) is placed, and having a control/evaluation unit (8) which uses the measurement voltage (U) induced in the at least one measuring electrode (4; 5) to provide information relating to the volumetric or mass flow rate of the medium (11) in the measuring tube (2). At least one radial depression (21) or a radial elevation is arranged in the opposite second end region of the electrode shaft (18) of the measuring electrode (4; 5). Furthermore, provision is made of a clamping or latching element (22) which is configured in such a manner that, in engagement with the at least one radial depression (21) or elevation, it fixes the measuring electrode (4; 5) in the hole (27) in the measuring tube (2) in the axial direction.

IPC 8 full level

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