Title (en)

ANTENNA DEVICE FOR INJECTING OR EXTRACTING MICROWAVES INTO/FROM TUBULAR HOLLOW BODIES, AND DEVICE FOR MEASURING MASS FLOW BY USING ANTENNA DEVICES OF THIS TYPE

Title (de)

ANTENNENEINRICHTUNG ZUR EIN- ODER AUSKOPPLUNG VON MIKROWELLEN IN ROHRF\RMIGEN HOHLK\RPERN UND VORRICHTUNG ZUR MASSESTROMMESSUNG MITTELS DERARTIGER ANTENNENEINRICHTUNGEN

Title (fr)

DISPOSITIF D'ANTENNE POUR INJECTION ET DECOUPLAGE DE MICRO-ONDES DANS DES CORPS CREUX TUBULAIRES ET DISPOSITIF POUR MESURER LE DEBIT MASSIQUE AU MOYEN DE DISPOSITIFS D'ANTENNE DE CE TYPE

Publication

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Application

EP 05813486 A 20051125

Priority

- EP 2005012603 W 20051125
- DE 102004057087 A 20041125

Abstract (en)

[origin: WO2006056455A1] The invention relates to an antenna device for injecting or extracting electromagnetic high-frequency waves, particularly microwaves, into/from a tubular hollow body (1). This antenna device comprises, as a radiator element, at least one flat patch element (2, 3), which is placed on a dielectric substrate (8) inside a tube outer wall part (7) of the hollow body (1). The antenna device is characterized in that the radiator element is integrated in the tube inner wall (5) of the hollow body (1) and is adapted to the curved longitudinal wall of the hollow body (1) by being provided with curved surfaces. The patch element (2, 3) is provided with a rectangular shape and is placed with its longitudinal side (14) transversal to the longitudinal direction of the hollow body. At least one additional similar second patch element (3) is integrated in the tube inner wall (5) opposite the supplying first patch element (2). A device for measuring mass flow is formed in a delivery tube section from at least two axially interspaced antenna devices of the aforementioned type. The mass flow is calculated based on the particle current density in the medium being delivered and on the flow rate of the particle flow, said mass flow depicting the delivery intensity or delivery volume.

IPC 8 full level

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CPC (source: EP US)

G01F 1/662 (2013.01 - EP US); **G01F 1/7088** (2013.01 - EP US); **G01F 1/74** (2013.01 - EP US); **G01F 1/86** (2013.01 - EP US); **H01P 5/107** (2013.01 - EP US); **H01Q 1/38** (2013.01 - EP US)

Citation (search report)

See references of WO 2006056455A1

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