

Title (en)

DEVICE AND METHOD FOR ASCERTAINING THERMAL CONDUCTIVITY OF A GAS, TANK ARRANGEMENT, AND VEHICLE

Title (de)

VORRICHTUNG UND VERFAHREN ZUM ERMITTELN EINER WÄRMELEITFÄHIGKEIT EINES GASES, TANKANORDNUNG UND FAHRZEUG

Title (fr)

DISPOSITIF ET PROCÉDÉ DE DÉTERMINATION DE CONDUCTIVITÉ THERMIQUE D'UN GAZ, ENSEMBLE RÉSERVOIR ET VÉHICULE

Publication

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Application

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Abstract (en)

[origin: WO2022189354A1] The invention relates to a device for ascertaining a hydrogen concentration or hydrogen mixture concentration, having: an electric conductor assembly (2, 200, 300) which is designed such that it can be brought into contact with the hydrogen or hydrogen mixture and which is in the form of a voltage divider with two elements (21, 221, 321, 521, 22, 222, 322), wherein the first element is a first conductor (21, 221, 321) which, at least in a current-conducting state, has a resistance value that differs from that of the second element (22, 222, 322); a measuring bridge (4, 240, 340) with two voltage dividers connected in parallel, one of said voltage dividers being formed by the electric conductor assembly (2, 200, 300); an actuation unit (6) for applying an AC voltage (U0) to the measuring bridge (4, 240, 340); a voltage measuring unit (8) for measuring a bridge voltage (Ub); and an analysis unit (10) which is configured to ascertain the thermal conductivity of the hydrogen or hydrogen mixture by analyzing the bridge voltage (Ub) using the 3-omega method.

IPC 8 full level

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