

Title (en)

DEVICE AND METHOD FOR ASCERTAINING THE THERMAL CONDUCTIVITY OF A FLUID

Title (de)

VORRICHTUNG UND VERFAHREN ZUM ERMITTELN DER WÄRMELEITFÄHIGKEIT EINES FLUIDS

Title (fr)

DISPOSITIF ET PROCÉDÉ PERMETTANT DE DÉTERMINER LA CONDUCTIVITÉ THERMIQUE D'UN FLUIDE

Publication

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Application

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Abstract (en)

[origin: WO2021219709A1] The invention relates to a device for ascertaining a property of a fluid, having: an electric conductor assembly (2, 200, 300) which is designed to be at least partly brought into contact with the fluid and which is designed as a voltage divider with two elements (21, 221, 321, 521, 22, 222, 322), wherein the first element is a first conductor (21, 221, 321, 521) 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 (U<sub>0</sub>) to the measuring bridge (4, 240, 340); a voltage detection unit (8) for detecting a bridge voltage (U<sub>b</sub>); and an analysis unit (10) which is configured to ascertain a thermal conductivity as the property of the fluid by analyzing the bridge voltage (U<sub>b</sub>) using the 3-omega method.

IPC 8 full level

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