METHOD AND DEVICE FOR PURIFYING FLUIDS

Method and apparatus for the purification of fluids

The invention relates to a method for the purification of fluids which is preferably carried out in an apparatus for the purification of fluids such as in an absorption column or in a desorption column. The apparatus contains a structured packing whose pressure loss is reduced. The packing is in particular suitable for absorption applications with aqueous systems such as CO_2 absorption from stack gas.

The principle of structured packings has been used for decades in absorption (cf. K. Sattler "Thermische Trennverfahren" [Thermal Separation Processes], VCH Verlag, Weinheim 1995) since the energy to be input and the construction height of the absorption column can herewith be saved.

Structured packings are made in a commercial embodiment as folded metal sheets arranged one after the other whose structure has inclined channels which continuously cross one another. These channels positively influence the flows of the gas phase and the liquid phase within the packing and facilitate the mass transfer between the phases. That is, the gas phase and liquid phase are brought into contact in the channels of the packing and the mass transfer between the phases is thus facilitated.

To increase the separating capacity of a structured packing, the surface of the structured packing is usually enlarged, which is usually achieved by a higher