

Abstract

In a chemical reactor for heterogeneously catalysed reaction of a fluid, comprising a holding device for catalyst particles and/or inert particles (80, 100) through which the fluid flows, the side of the holding device lying upstream when viewed in the direction of flow of the fluid comprises knitted wire mesh fabric (50), and the average clear mesh width of the knitted wire fabric (50) is smaller than the average particle size $x_{50.3}$ of the particles (80, 100). The invention furthermore relates to a process for reaction of a fluid, wherein the reaction is carried out in a reactor according to the invention in the presence of heterogeneous catalyst particles (80) and the catalyst particles (80) are arranged in the holding device for catalyst particles (80). The invention also provides the use of knitted wire mesh fabric (50) as a holding device for catalyst particles and/or inert particles (80, 100) in chemical reactors.