Abstract

A process for preparing formaldehyde by gas-phase oxidation of methanol vapor by means of a gas stream comprising molecular oxygen in the presence of a fixed-bed catalyst comprising iron and molybdenum, wherein the process is carried out in a reactor (1) having heat-exchange plates (2) which are arranged in the longitudinal direction of the reactor (1) and have a spacing between them and through which a heat transfer medium flows, inlet and outlet facilities (3, 4) for the heat transfer medium to the heat-exchange plates (2) and also gaps (5) between heat-exchange plates (2) in which the fixed-bed catalyst is present and into which the methanol vapor and the gas stream comprising molecular oxygen are passed, is described.