

KINETICS OF METHANE PENETRATION
INTO A SPACE ADJACENT
TO A POROUS SOLID BODY

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S u m m a r y

Main stages of a gas release from a porous solid body are considered, and the dependences of the gas concentration on time in the air on each of the stages are determined. For the case of the methane release from a coal substance, the quantity of the released methane is determined along with a time needed for the gas dangerous concentration to be reached in an excavation room. It is established that the average concentration of methane in the air and the characteristic transient period of time weakly depend on the methane-in-air diffusion coefficient; instead, these are determined mainly by the coal massif parameters.