

($\bar{\phi} = 20.75\%$) develops v maxima that move toward higher v as the pore fluid conductivity increases.

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Many of the LLL energy and resource projects require a knowledge of the permeability and porosity of underground regions, both as existing and under postshot fracture conditions. In particular, the in situ coal gasification concept is now under active study, with field experiments under way in Kemmerer, Wyoming. In this report we first review several simple models describing transient fluid flow through porous media, with special attention to anisotropic effects. Under certain restrictions, the model equations may be solved in closed form, allowing direct calculation of permeability and porosity. Information gained from transient tests is contrasted with steady-state runs. Some sample calculations are included for both line- and point-injection tests.