GURBANOV R.S., ABDINOV E.T.

MODEL OF "HYPOTHETICAL CANAL" OF FLOW IN POROUS MEDIUM

Abstract

In the paper for the studying of movement of rheological stationary fluids in porous medium the model of "hypothetical canal" is assumed. The essence of this model is in the following: filtration process of any rheological stationary fluids in porous medium is identified with flow of such fluid in non-circular canal, the hydraulic radius and coefficient of form which are equal to hydraulic radius and coefficient of form of porous medium and for same pressure gradients the velocity in canal is equal to filtration rate in porous medium. The model of "hypothetical canal" allows to predict the rheological behaviour of anomalous fluids in porous medium on of results of capillary flowmeter. The generalized resistance law is assumed for the case of viscous regime of filtration.