A Frictional Contact Problem for Piezoelectric Materials with Internal State Variablesand Normal Damped Response

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Abstract

In this paper, we consider a dynamic frictional contact problem between two electro-elasto-viscoplastic bodies with internal state variables and damage. The contact is frictional, modeled with a normal damped condition involving adhesion effect of contact surfaces. We present a variational formulation for the model and state an existence and uniqueness result of the weak solution. The proof is based on arguments of time dependent variational inequalities, differential equations and fixed point.

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