

INTRINSIC DECAY RATES FOR THE ENERGY OF A SINGULAR NONLOCAL VISCOELASTIC SYSTEM

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Abstract

This work deals with intrinsic decay rates for the energy of an initial boundary value problem with a nonlocal boundary condition for a system of nonlinear singular viscoelastic equations. We prove the intrinsic decay rates for the energy of a singular one-dimensional viscoelastic system with a nonlinear source term and nonlocal boundary condition of relaxation kernels described by the inequality $g_{-i}'(t) \leq -H(g_{-i}(t))$, ($i=1,2$) for all $t \geq 0$, with H convex.

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