

**Jin, Kun-Peng; Liang, Jin; Xiao, Ti-Jun**

**New general decay result for a class of neutral viscoelastic equations.** (English)

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**Summary:** We are concerned with the decay estimate of a neutral viscoelastic equation with nonlinear boundary damping and boundary memory effect. We obtain a general decay theorem for the neutral viscoelastic equation by showing that its system energy is controlled by a solution of the associated ODE. Moreover, distinguished from the previous compactness-uniqueness method, we propose an analytical approach to estimate the low-order terms by using the Sobolev imbedding theory.

**MSC:**

**35B40** Asymptotic behavior of solutions to PDEs

**35L20** Initial-boundary value problems for second-order hyperbolic equations

**35R09** Integro-partial differential equations

**Keywords:**

neutral viscoelastic equation; boundary memory effect; decay estimate; nonlinear boundary damping

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