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Global in time solvability of the initial boundary value problem for some nonlinear dissipative evolution equations

Comment.Math.Univ.Carolinae 34,2 (1993) 295-312.

Abstract: The global in time solvability of the one-dimensional nonlinear equations of thermoelasticity, equations of viscoelasticity and nonlinear wave equations in several space dimensions with some boundary dissipation is discussed. The blow up of the solutions which might be possible even for small data is excluded by allowing for a certain dissipative mechanism.

Keywords: nonlinear thermoelasticity, viscoelasticity, nonlinear wave equation, global solutions

AMS Subject Classification: 35L20, 35L70, 73B30, 73F99