

A weak formulation for a dynamic process in delamination with unilateral constraints

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We consider a system of two elastic bodies glued along an interface where delamination occurs. We study the evolution of the system where inertial and viscosity terms are taken into account, and where the internal variable linked with the delamination process evolves in a rate-independent way. The evolution is coupled with an unilateral constraint on the jump of the displacement on the interface. We then introduce a weak formulation for the problem and prove an existence result for solutions of it.