ASYMPTOTIC ANALYSIS OF A DYNAMICAL PROBLEM OF NON-ISOTHERMAL LINEAR ELASTICITY WITH FRICTION

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Abstract

In this paper, we are interested in the study of the asymptotic analysis of a dynamical problem in elasticity with non linear friction of Tresca type. The Lamé coefficients of thin layer are assumed to vary with respect to the thin layer parameter ε and depend of the temperature. We prove the existence and uniqueness of the weak solution for the limit problem. The proof is carried out by the use of the asymptotic behaviour when the dimension of the domain tends to zero.

Keywords: A priori inequalities; Free boundary problems; Elasticity system; Asymptotic approach; Tresca law.

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