عنوان مقاله:

PENALTY METHOD FOR UNILATERAL CONTACT PROBLEM WITH COULOMB'S FRICTION FOR LOCKING MATERIAL

محل انتشار:

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خلاصه مقاله:

In this work, we study a unilateral contact problem with non local friction of Coulombbetween a locking material and a rigid foundation. In the first step , we present the mathematicalmodel for a static process, we establish the variational formulation in the form of a variationalinequality and we prove the existence and uniqueness of the solution. In the second step, usingthe penalty method we introduce the penalized problem numerical in the form of variationalequality where we replace the law behavior and the law contact of Sigorini . The we show theconvergence of the continuous penalty solution as the penalty parameter n tends towards infinity.Then, the analysis of the finite element discretized penalty method is carried out.

کلمات کلیدی:

Locking material, Unilateral contact, Coulomb's friction, variational inequality, penalty method, Finite Element