Numerical modeling of large elastoplastic strains in terms of principal stretches. II. Physical relations, calculation algorithm

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Abstract

The constitutive relations and plastic flow rule are derived from the thermodynamics equations. The known procedures of determining the plastic strain rate value are described. A calculation algorithm is presented that is based on the incremental loading, linearization of the virtual power equation and the projection method. A numerical example is presented. © 2010 Allerton Press, Inc.

Keywords

Constitutive relations, Plastic flow rule, The projection method