Asymmetric Continuum and Anisotropy

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A b s t r a c t

We present a relation between stress moments and antisymmetric part of stresses and the related constitutive law joining those stresses with the particle/point rotations. Correspondence of the asymmetric continuum theory to the micromorphic theory is considered. An extension of the asymmetric continuum theory for the case of 2D anisotropy for antisymmetric stresses leads us to the problems of friction anisotropy and fracture pattern.

Key words: asymmetric stresses, spin and twist motion, friction anisotropy.