Convexity conditions for a bounding surface model with directional distortional hardening

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ABSTRACT

New models featuring directional distortional changes of the shape of yield surface in stress space based on original ideas published in papers [1] and [2] were evaluated in terms of thermodynamic consistency and yield surface convexity. A series of assumptions concerning the distribution of free energy among internal mechanisms was thoroughly tested, closely following the energy fluxes in special cases of non-proportional loading trajectories. Sufficient conditions of convexity were projected into the calibration requirements of these new models.

REFERENCES


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