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Autore	Ruck Johannes
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Sommario/riassunto	Martensite forms under rapid cooling of austenitic grains accompanied by a change of the crystal lattice. Large deformations are induced which lead to plastic dislocations. In this work a transformation model based on the sharp interface theory, set in a finite strain context is developed. Crystal plasticity effects, the kinetic of the singular surface as well as a simple model of the inheritance from austenite dislocations into martensite are accounted for.