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Title: Uniaxial Compression Tests of Metallic Foams: A Recipe

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Abstract: In the case of metallic foams the stress-strain curve observed during uniaxial compression is often not smooth; plateau region is often missing, and the curve instead of slowly increasing stress before final densification takes place often exhibit a lot of peaks with stress drops even significantly below collapse stress value of foam. It is generally accepted that the origin of this behaviour is linked to the heterogeneity and/or anisotropy of foams and is influenced by ductility or brittleness of used matrix alloy and the presence of surface skin. This paper is designed as a recipe for metal foam investigator how to handle the uniaxial compression test results on real metallic foams. Mother aim of this paper is to introduce unusual events that can occur during foam compression test.

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