A Ductile Failure Criterion for Predicting Sheet Metal Forming Limit

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Highlights

- A new ductile failure criterion is proposed by defining critical damage as a function of strain path and initial sheet thickness and treating Localized Necking as failure.
- With the help of determined effect functions, the criterion can be calibrated by using limit strain from uniaxial tension.
- The criterion can be used to predict FLCs under linear and bilinear strain paths.
- The criterion can be used to predict failure in strong nonlinear strain path condition.