

## Accepted Manuscript

Modeling the Formability of Aluminum Alloys at Elevated Temperatures Using a New Thermo-Elasto-Viscoplastic Crystal Plasticity Framework

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PII: S0020-7403(16)31116-X  
DOI: [10.1016/j.ijmecsci.2017.05.005](https://doi.org/10.1016/j.ijmecsci.2017.05.005)  
Reference: MS 3680



To appear in: *International Journal of Mechanical Sciences*

Received date: 17 December 2016  
Revised date: 15 May 2017  
Accepted date: 17 May 2017

Please cite this article as: Edward Cyr , Mohsen Mohammadi , Abhijit Brahme , Raja K. Mishra , Kaan Inal , Modeling the Formability of Aluminum Alloys at Elevated Temperatures Using a New Thermo-Elasto-Viscoplastic Crystal Plasticity Framework, *International Journal of Mechanical Sciences* (2017), doi: [10.1016/j.ijmecsci.2017.05.005](https://doi.org/10.1016/j.ijmecsci.2017.05.005)

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**Highlights**

- New thermo-elasto-viscoplastic constitutive model for forming limit analysis at high temperature of FCC polycrystals
- Temperature dependence of all components of deformation is considered
- The model is implemented in Marciniak-Kuczynski framework to study effect of temperature
- Equations for the variation of hardening parameters and imperfection parameter with temperature are developed
- With one fitting parameter set, forming limit is predicted at new temperature

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