

Accepted Manuscript

Simulation of the flow behavior of AZ91 magnesium alloys at high deformation temperatures using a piecewise function of constitutive equations

Rui-Bin Mei , Li Bao , Fei Huang , Xin Zhang , Xi-Wei Qi ,
Xiang-Hua Liu

PII: S0167-6636(17)30749-4
DOI: [10.1016/j.mechmat.2018.07.011](https://doi.org/10.1016/j.mechmat.2018.07.011)
Reference: MECMAT 2904



To appear in: *Mechanics of Materials*

Received date: 26 October 2017
Revised date: 11 July 2018
Accepted date: 16 July 2018

Please cite this article as: Rui-Bin Mei , Li Bao , Fei Huang , Xin Zhang , Xi-Wei Qi , Xiang-Hua Liu , Simulation of the flow behavior of AZ91 magnesium alloys at high deformation temperatures using a piecewise function of constitutive equations, *Mechanics of Materials* (2018), doi: [10.1016/j.mechmat.2018.07.011](https://doi.org/10.1016/j.mechmat.2018.07.011)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- Piecewise function models for establishing constitutive equations of AZ91 alloy are proposed.
- New functions for describing material constants in constitutive equations are proposed.
- Piecewise function models show higher precision and good capability for describing constitutive equations.
- Description of nonlinear function is better for predicting variation of flow stress after the peak value.

Download English Version:

<https://daneshyari.com/en/article/7178477>

Download Persian Version:

<https://daneshyari.com/article/7178477>

[Daneshyari.com](https://daneshyari.com)