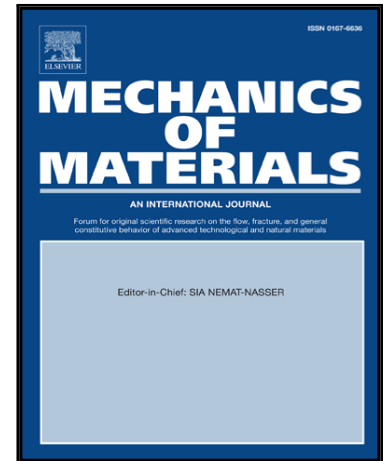


## Accepted Manuscript

Stress relaxation behavior of an aluminium magnesium silicon alloy in different temper condition

Sumeet Mishra , Manasij Yadava , Kaustubh N. Kulkarni ,  
N.P. Gurao

PII: S0167-6636(17)30763-9  
DOI: [10.1016/j.mechmat.2018.07.010](https://doi.org/10.1016/j.mechmat.2018.07.010)  
Reference: MECMAT 2903



To appear in: *Mechanics of Materials*

Received date: 1 November 2017  
Revised date: 7 July 2018  
Accepted date: 16 July 2018

Please cite this article as: Sumeet Mishra , Manasij Yadava , Kaustubh N. Kulkarni , N.P. Gurao , Stress relaxation behavior of an aluminium magnesium silicon alloy in different temper condition, *Mechanics of Materials* (2018), doi: [10.1016/j.mechmat.2018.07.010](https://doi.org/10.1016/j.mechmat.2018.07.010)

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**

- Activation volume in the presence of semi-coherent  $\beta''$  precipitates is significantly lower compared to other microstructural features.
- Effective stress is almost two times higher in the presence of semi-coherent  $\beta''$  precipitates compared to other microstructural features.
- Exhaustion rate of mobile dislocation density is negligible in the over-aged sample compared to solutionized and peak-aged sample.
- Relaxation strain is higher in the presence of semi-coherent  $\beta''$  precipitates compared to other microstructural features.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/7178475>

Download Persian Version:

<https://daneshyari.com/article/7178475>

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