

## Accepted Manuscript

A viscoplastic response of a dual phase steel exposed to prior cyclic loadings

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PII: S0167-6636(17)30144-8  
DOI: [10.1016/j.mechmat.2017.07.019](https://doi.org/10.1016/j.mechmat.2017.07.019)  
Reference: MECMAT 2776



To appear in: *Mechanics of Materials*

Received date: 22 February 2017  
Revised date: 31 July 2017  
Accepted date: 31 July 2017

Please cite this article as: W. Moćko , Leopold Kruszka , A viscoplastic response of a dual phase steel exposed to prior cyclic loadings, *Mechanics of Materials* (2017), doi: [10.1016/j.mechmat.2017.07.019](https://doi.org/10.1016/j.mechmat.2017.07.019)

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## Highlights

- Initial cyclic loadings diminishes strain rate sensitivity
- Cumulative fatigue damage and cyclic stress magnitude were included into model
- New model predicts work and rate hardening effect affected by pre-fatigue
- Microstructural evolution due to cyclic loadings were considered

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