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Home ► All Journals ► Physical Sciences ► Philosophical Magazine ► List of Issues ► Volume 88, Issue 7 ► Strain hardening behaviour and the Taylo

Philosophical Magazine >

Volume 88, 2008 - Issue 7

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Strain hardening behaviour and the Taylor factor of pure magnesium

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Pages 977-989 | Received 15 Nov 2007, Accepted 05 Feb 2008, Published online: 17 Aug 2009

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https://doi.org/10.1080/14786430801968611

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Acknowledgements

One of the authors (PL) would like to thank the Ministry of Education of the Czech Republic for financial support under the research project MSM 1M2560471601. The authors are indebted to Sean Agnew from the University of Virginia for encouragement and critical comments on the manuscript. Useful criticism from the journal's reviewers is gratefully acknowledged.

Notes

Notes

1. Kelley and Hosford <u>13</u> showed that the yield surface of textured polycrystals of pure Mg is highly non-equiaxed due to the stress asymmetry of twinning; however, it takes a nearly equiaxed shape after the first 6–8% strain, once twinning is over.

2. Preserving the yield surface's initial shape requires strain hardening proportional to the current flow stress, an assumption which is not easy to justify by dislocation theory



Related Research Data Effect of deformation temperature on Hall-Petch relationship registered for polycrystalline magnesium Source: Materials Letters Pair interaction of pyramidal dislocations and its contribution to flow stresses in Mg crystals during slip in system Source: Materials Science and Engineering Application of texture simulation to understanding mechanical behavior of Mg and solid solution alloys containing Li or Y Source: Acta Materialia Microscopic observations of glide in non close-packed planes in aluminium, and comparison with magnesium Source: Acta Metallurgica The Influence of Temperature and Strain Rate on the Flow Stress of Magnesium Single Crystals Source: Australian Journal of Physics The deformation of magnesium single crystals Source: Unknown Repository Electron-microscopic Investigation of Low Temperature Work Hardening of Mg Single Cryst X Sourc The r Sourc Polys Sourc Solid e on the e in basa Sourc Effect prope Sourc **Kinet**

The type of dislocation interaction as the factor determining work hardening

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