

Awards for AMAG PhD student

Dr. Stefan Pogatscher receives awards in USA and Austria.

Stefan Pogatscher received the Acta Materialia Student Award 2011 at the MS&T meeting in Pittsburgh, USA, for his publication „Mechanisms controlling the artificial aging of Al-Mg-Si Alloys“ [1] on 8th October 2012. The prize, awarded annually by the highly respected leading metallurgy journal Acta Materialia for outstanding publications, is one of the most important international accolades for PhD students in materials science.

The paper, which also ranks among the „Top 25 Most Downloaded Articles 2011 „in Acta Materialia, describes the effect of natural aging on the artificial aging of Al-Mg-Si alloys, a topic which has been discussed for more than 70 years. For the first time a strong temperature dependence of the effect was shown, which enabled the development of a new physical model to understand the problem.

In addition to the fundamental character of the paper, it was its crucial importance for the aluminium industry that significantly contributed to the decision of the committee. An application of the theoretical background provides a reduction in usual heat treatment times while simultaneously increasing strength. The paper originated during Stefan Pogatscher's work

on his thesis, which was supported, not only financially, within the strategic development of age-hardenable high strength aluminium alloys by AMAG.

In addition to this international award won for one of his publications, Stefan Pogatscher also gained recognition for his thesis at the national level. He received the University Research Award of the Industry 2012 at the Aula of the University of Graz on 30th of October 2012. This prize is awarded annually by the Federation of Austrian Industries Styria for PhD theses of outstanding scientific quality submitted at one of the Styrian universities that deal with industrial related problems and yield high-potential results. The thesis written in the course of a collaboration between Montanuniversitaet Leoben, ETH Zurich and AMAG Austria Metall AG as industrial partner covers a kinetic and imaging analysis of aging processes in Al-Mg-Si alloys. The fact that the newly developed model can now be applied to answer important questions such as the effect of storage at room temperature is to be highlighted from an industrial point of view. Based on the described principles AMAG already developed several new industrial heat treatment strategies and filed a patent application. ■

Literature:

[1] S. Pogatscher, H. Antrekowitsch, H. Leitner, T. Ebner, und P.J. Uggowitzer, Acta Mater, 59 (2011) 3352-3363.



Dr. Stefan Pogatscher receives the Acta Materialia Student Award 2011 at the ASM Leadership Awards Luncheon on 8th October 2012, David L. Lawrence Convention Center, Pittsburgh, USA