

The following are selected readings for magnesium alloy development reviewed by an advisory group of TMS subject matter experts



PAPER TITLE	AUTHOR(S)	SOURCE	MORE
"Development of a New Wrought Magnesium-Aluminum-Manganese Alloy AM30"	A. A. Luo and A. K. Sachdev	Met. Trans. A, Vol. 38A, June 2007. Pp. 1184-1192	Read Abstract
"Effect of Sr Additions on the Microstructure and Strength of a Mg-Al-Ca Ternary Alloy"	A. Suzuki, N. D. Saddock, L. Riester, E. Lara-Curzio, J. W. Jones and T. M. Pollock	Met. Trans. A. Vol. 38A, No. 2. February, 2007. Pp. 420-427	Read Abstract
"The Capability of MRI Magnesium Alloys to Address High Temperature Applications Requirements"	N. Moskovich, E. Aghion, A. Arnon and B. Bronfin	Magnesium Technology 2007, p. 253	Link to 2007 Proceedings
"Microstructure, Corrosion and Creep of As-Cast Magnesium Alloys Mg-2Sn-2Ca and Mg-4Sn-2Ca"	T. A. Leil, K. P. Rao, N. Hort, Y. Huang, C. Blawert, H. Dieringa, and K. U. Kainer	Magnesium Technology 2007, p. 257	Link to 2007 Proceedings
"Influence of Alloying Elements on the Mechanical Properties of Zinc Containing Extruded Magnesium Alloys"	E. M. Garcia, J. Bohlen, D. Letzig, and K. U. Kainer	Magnesium Technology 2007, p. 263	Link to 2007 Proceedings
"Subgrain Stabilized Microstructure in Mg-Zn-Sn-Y Alloys"	A. Gorny, A. Katsman, I. Popov, and M. Bamberger	Magnesium Technology 2007, p. 307	Link to 2007 Proceedings
"AM30 - A New Wrought Magnesium Alloy"	A. Luo and A. Sachdev	Magnesium Technology 2007, p. 321	Link to 2007 Proceedings
"Thermodynamic Modeling of the Mg-Sn-Zn-Al System and Its Application to Mg Alloy Design"	I.-H. Jung, W.-J. Park, S.-H. Ahn, D.-H. Kang and N. J. Kim	Magnesium Technology 2006, p. 457	Link to 2006 Proceedings
"AM-HP2: A New Magnesium High Pressure Diecasting Alloy for Automotive Powertrain Applications"	M. A. Gibson, C. J. Bettles, M. T. Murray, and G. L. Dunlop	Magnesium Technology 2006, p. 327	Link to 2006 Proceedings
"AM-Lite: A New Magnesium Diecasting Alloy for Decorative Applications"	T. Abbott, M. Murray, and G. Dunlop	Magnesium Technology 2006, p. 481	Link to 2006 Proceedings
"Mechanisms of Creep Deformation in Mg-Sc-based Alloys"	B. L. Mordike, I. I. Stulíková, and B. Smola	Met. Trans. A. Vol. 36A. July, 2005, pp. 1729-1736	Read Abstract
"Process and Alloy Development for Hydrostatic Extrusion of Magnesium: The European Community Research Project MAGNEXTRUSCO"	J. Bohlen, J. Swiostek, W. H. Sillekens, P.-J. Vet, D. Letzig, and K. U. Kainer	Magnesium Technology 2005, p. 241	Link to 2005 Proceedings
"The Role of Rare Earth Elements in Structure and Property Control of Magnesium Die Casting Alloys"	P. Bakke and H. Westengen	Magnesium Technology 2005, p. 291	Link to 2005 Proceedings
"Metallurgical Background to the Development of Creep Resistant Gravity Casting Magnesium Alloys"	B. Bronfin, M. Katsir, O. Bar-Yosef, F. Moll and S. Schumann	Magnesium Technology 2005, p. 395	Link to 2005 Proceedings
"Magnesium Diecasting Alloys for High Temperature Applications"	M. O. Perguleryuz and A. A. Kaya	Magnesium Technology 2004, p. 281	Read the Full Paper
"New Magnesium Alloy for Aerospace and Specialty Applications"	P. Lyon	Magnesium Technology 2004, p. 311	Read the Full Paper

"Enhanced Ductility and Strength Through RE Addition to Magnesium Die Casting Alloys"	<i>P. Bakke, K. Pettersen and H. Westengen</i>	Magnesium Technology 2003, p. 171	Read the Full Paper
"Dead Sea Magnesium Alloys Newly Developed for High Temperature Applications"	<i>E. Aghion, B. Bronfin, F. Von Buch, S. Schumann and H. Friedrich</i>	Magnesium Technology 2003, p. 177	Read the Full Paper
"Magnesium Diecasting Alloy AJ62x with Superior Creep Resistance, Ductility and Diecastability"	<i>M. Perguleryuz, P. Labelle, D. Argo and E. Baril</i>	Magnesium Technology 2003, p. 201	Read the Full Paper
"AMC-SC1: An Elevated Temperature Magnesium Alloy Suitable for Precision Sand Casting of Powertrain Components"	<i>C. J. Bettles, C. T. Forwood, D. H. StJohn, M. T. Frost, D. S. Jones, M. Qian, G-L. Song, J. R. Griffiths and J. F. Nie</i>	Magnesium Technology 2003, p. 223	Read the Full Paper
"Magnesium for Crashworthy Components"	<i>T Abbott, M. Easton and R. Schmidt</i>	Magnesium Technology 2003, p. 227	Read the Full Paper
"Magnesium Wrought Alloys for Automotive Applications"	<i>R. Gradinger and P. Stollig</i>	Magnesium Technology 2003, p. 231	Read the Full Paper
"Elevated Temperature Mg-Al-Sr: Creep Resistance, Mechanical Properties, and Microstructure"	<i>E. Baril, P. Labelle, and M. O. Pekguleryuz</i>	JOM, November 2003, p. 34	Read the Full Paper
"Improving the Strength and Ductility of Magnesium Die-Casting Alloys via Rare-Earth Addition"	<i>Per Bakke, Ketil Pettersen, and Håkon Westengen</i>	JOM, November 2003, p. 46	Read Full Paper
"New Die-Casting Alloy MRI153 For Power-Train Applications"	<i>F. von Buch, S. Schumann, H. Friedrich, E. Aghion, B. Bronfin, B. L. Mordike, M. Bamberger and D. Eliezer</i>	Magnesium Technology 2002, p. 61	Read the Full Paper
"Process Parameters and Diecasting of Noranda's AJ52 High Temperature Mg-Al-Sr Alloy"	<i>D. Argo, M. Pekguleryuz, P. Labelle, P. Vermette, R. Bouchard and M. Lefebvre</i>	Magnesium Technology 2002, p. 87	Read the Full Paper
"Microstructure and Creep Behavior of a Die Cast Magnesium-Rare Earth Alloy"	<i>I. P. Moreno, T. K. Nandy, J. W. Jones, J. E. Allison and T. M. Pollock</i>	Magnesium Technology 2002, p. 111	Read the Full Paper
"Development of Creep Resistant Mg-Al-Sr Alloys"	<i>Mihriban O. Pekguleryuz and Eric Baril</i>	Magnesium Technology 2001, p. 119	Read Full Paper
"Effect of Sb on the Microstructure and Mechanical Properties of AZ91 Magnesium Alloy"	<i>Qudong Wang, Wenzhou Chen, Wenjiang Ding, Yanping Zhu, and M. Mabuchi</i>	Metallurgical and Materials Transactions A, Vol 32A, March 2001, p. 787	Read Abstract
"Magnesium Alloy Development Guided by Thermodynamic Calculations"	<i>J. Groebner, D. Kevorkov, R. Schmid-Fetzer</i>	Magnesium Technology 2001, p. 105	Read the Full Paper
"Tensile and Compressive Creep of Magnesium-Aluminum-Calcium Based Alloys"	<i>A. Luo and B. R. Powell</i>	Magnesium Technology 2001, p. 137	Read the Full Paper
"Characteristics and Perspectives of New Magnesium-Lithium Alloys-An Approach Towards LAE"	<i>H. Haferkamp, U. Holzkamp, P. Juchmann, V. Kaese, M. Niemeyer, and P.-T. Tai</i>	Magnesium Technology 2000, p. 161	Read the Full Paper
"Design Magnesium Alloys: How Computational Thermodynamics Can Help"	<i>Z.-K. Liu</i>	Magnesium Technology 2000, p. 191	Read the Full Paper
"Development of High Creep-Resistant Magnesium Alloy Strengthened by Ca Addition"	<i>T. Horie, H. Iwahori, Y. Seno, and Y. Awano</i>	Magnesium Technology 2000, p. 261	Read the Full Paper
"AM-Lite and AM-HP2 - New Magnesium Alloys Offer New Opportunities"	<i>Thomas Sweder</i>	SAE 2006 World Congress & Exhibition, April 2006. Session: Achieving Lightweight Vehicles (Part 1 of 2)	Read Abstract
"Rational Selection of Mg Concentration Specifications for 319-Type Alloys"	<i>Jacob W. Zindel, K. A. Kofeldt, Larry Alan Godlewski, Ravi Vijayaraghavan, William T. Donlon</i>	SAE 2006 World Congress & Exhibition, April 2006. Session: Advances in Lightweight Materials - Casting (Part 1 of 2)	Read Abstract