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**Identification of new alleles in salinity tolerant rice local cultivars through phenotypic and genotypic screening**

Magnesium alloys with their high specific strength and low weight are used as structural materials in different applications. They have suitable mechanical and excellent damping. Magnesium wrought alloys, such as for instant AZ31, are needed for applications where their weight is important. In the accumulative roll bonding (ARB) technique, stacking of a material and conventional roll-bonding are repeated in the process. Samples for further studies were cut from the sheets so that the longer axis was either parallel (L samples) or perpendicular (T samples) to the rolling direction. Tensile tests were performed at temperatures ranging from room temperature up to 300 °C. Different results were obtained for L and T samples. This anisotropy decreases with increasing number of rolling passes and increasing deformation temperature. The amplitude dependent internal friction was

measured at room temperature. Anelastic planar anisotropy of internal friction was observed; the logarithmic decrement was higher in rolled sheets cut perpendicular to the rolling direction than that in the samples where the longer axis was parallel to the rolling direction. The linear thermal expansion of samples was measured in the temperature range from room temperature up to 400 °C. Planar anisotropy of the thermal expansion was found. Thermal diffusivity and thermal conductivity were measured after 1 and 2 passes through the rolling mill. Thermal diffusivity was measured with the laser-flash method in the temperature range between 20 and 350 °C. Thermal conductivity depends on the number of rolling passes. Results are discussed in terms of microstructure and texture of materials prepared with ARB technique.

**Biography**

Lukac P, is a member of the Department of Physics of Materials, Charles University in Prague, a Fellow of European Academy of Sciences, and a Member of International Committee of the International Conference on Magnesium Alloys and Their Applications. He was a member of Scientific Committees of ca. 20 international conferences. He is a co-author of ca. 500 papers and ca. 9 scientific books. He has Award of the Humboldt Research Prize granted to internationally recognize foreign scholars.

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