Change of Internal Friction on Magnesium Alloy Depending on the Temperature and the Use of Mathematical Methods in the Evaluation of This Property

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The article is aimed on present research of internal friction mechanisms that are responsible for the temperature behaviour of AZ91 magnesium alloys. These mechanisms have been studied by ultrasonic resonant apparatus at a frequency close to 20470 Hz and in a temperature range from 50 °C up to 400 °C. The specimen on internal friction measurement has an hour glass shape. The specimens were in the as cast state and after measurement showed dendritic structure. Structure of magnesium alloys AZ91 was carried out after the homogenization annealing at temperature 390 °C. It was also used application of mathematical calculations for a more accurately experimental measurement of internal friction depending on the temperature.

Keywords: Internal Friction, Magnesium Alloy, Temperature, Resonant Frequency, Mathematical Calculation

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