

# Abstract

Magnesium alloys are valued for their low density and good mechanical properties. Their characteristic is the tendency to obtain a texture during processing, which together with their hcp crystal structure results in the anisotropy of some physical properties. In this work we examine the effect of the texture on the anisotropy of thermal expansion of the widely used AZ31 and ZE10 magnesium alloys. These alloys are in the form of thin rolled sheets and we examine them in an as-received state and in a condition after an annealing. The measured samples are cut out of the metal sheet in the direction of rolling and in the perpendicular direction. The measurement is carried out in the temperature range from room temperature to 400 °C. Measuring of the thermal expansion of sheets is problematic because they can bend and devalue the measurement results. The result of this work is a confirmation of the existence of this anisotropy and its description.