

Characterization and thermal analysis of some Al-Mg-Si sheets
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Abstract

The knowledge of the mechanical behaviour of Al-Mg-Si alloys during a heating cycle is very important. Metallographic investigation of samples of these alloys allows us to know the change in the grain size. X ray diffraction technique permits us to know the existing phases. Differential scanning calorimetry(DSC) study of the samples allows us to follow the phase transformations during heating with various heating rates. The exploitation of the DSC cures by different methods of calculi in order to obtain the corresponding activation energy to each of the transformation reactions, which permits the knowledge of the mechanism responsible for the reaction in question. The dilatometric helps also to well understand the phase transformations which take place during heating and to get also the corresponding activation energy to each of the above anomalous.

Key words: Al-Mg-Si alloys, light alloys, automobile industry, aerospace industry, precipitation.