

Thermal stability of Al-Fe-Mn-Si alloys prepared by twin roll casting accompanied by intensive cooling and plastic deformation was studied. The goal of the study is to map processes occurring during a model homogenization annealing of individual alloys which differ by the ratio of alloying elements. Model in-situ annealing in the transmission electron microscope and resistometry measurements with linear heating were used for identification of occurring processes. Another goal is to determine the crystallographic structures of primary and secondary phases present in the alloys. Results show that the concentration of alloying elements has a significant influence on transformation temperatures of primary phases as well as the structure of primary and secondary phases.