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Study of the structural evolution of Ni50%atAl50%at mixture during mechanical alloying

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Abstract : In this study elemental powder of 50 %at Ni and 50 %at Al mixture was mechanically alloyed in planetary ballmill Retsch PM400, for a predetermining time until 48h. Using X-ray diffraction and scanning electron microscopy (SEM) it was observed that milling of powder leads to the formation of NiAl phase. By the investigation of results from different techniques microstructural and morphology of the powder was investigated over time of milling.

Keywords : NiAl alloy, X-ray diffraction, SEM, laser granulometry