

건식 볼 밀링 공정에서 에너지 절약을 위한
나노 복합재 제조

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The metal/carbon nano tubes (CNTs) nano composites fabrication for saving energy by dry ball milling process using a various ball mill have recently gained scientific interest. Furthermore, the study of powder characteristics on CNTs and metal composites for useful application of industrial field was worked. In this study, we investigated the nano composite fabrication study on the effect of raw powder properties by dry grinding process with various media mills such as traditional ball mill, planetary ball mill and stirred ball mill. Also, interactions between CNTs and metal powders during the mechanical alloying via various ball mills have been investigated. The results have been monitored by powder morphology from the SEM photography, crystal structure from XRD, surface property from FESEM, thermal and electro conductivity, density and hardness of final products and simulated by computer simulation software. In this study, final products of nano composites were affected from raw powder characteristics.