

A Study on the Magnetic and Mechanical Properties of Nd-Fe-B Sintered Magnets According to Sintering Temperature

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Abstract : The effect of sintering temperature on the magnetic and mechanical properties of Nd-Fe-B sintered magnets has been investigated in this study. The sintering temperature changed from 950°C to 1120°C. While remanence and hardness of the magnets increased with increasing sintering temperature, the coercivity first increased, and then decreased. The optimum magnetic and mechanical properties of the magnets were obtained at the sintering temperature of 1050°C. In order to clarify the reason for the variation on magnetic and mechanical properties of the magnets, we systematically analyzed the microstructure.

Keywords : magnetic and mechanical property, microstructure, permanent magnets, sintered Nd-Fe-B magnet

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