

Preparation and Characterization of α -Alumina with Low Sodium Oxide

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Abstract : In order to prepare the α -alumina with low content of sodium oxide from aluminum trihydroxide as a reactant, three kinds of methods were employed as follows; the mixture of Chamotte (aggregate composed of silica and alumina), ammonium chloride and aluminum fluoride with aluminum trihydroxide under 1600°C, respectively. The sodium oxide in α -alumina produced above methods was analyzed by XRF and the particle size distribution was determined by particle size analyzer, and the specific surface area of α -alumina was measured by BET method, and phase of α -alumina produced was confirmed by XRD. Acknowledgement: This research was supported by Development Program of Technical Innovation funded by Korea Technology and Information Promotion Agency for SMEs (KTIP-2016-S2401821).

Keywords : α -alumina, sodium oxide, aluminum trihydroxide, Chamotte, ammonium chloride, aluminum fluoride

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