SAICHIT APAVIRA : PREPARATION OF SOME IMPORTANT MAGNESIUM COMPOUNDS FROM DOLOMITE ORES IN THAILAND. THESIS ADVISOR : ASSO. PROF. MAEN AMORASIT, PROF. SOMSAK DAMRONGLERD. 150 pp.

The samples of dolomite ores from Kanchanaburi mine were analyzed by various techniques, eg., volumetric analysis, XRFS, AAS, TGA, DTA, etc. for the chemical composition prior to use in the preparation of magnesium compounds. The optimum conditions for the calcination in the typical electric furnace and in the fluidized bed reactor were investigated. The maximum calcination obtained in the typical furnace was 96% at the temperature of 800°C within 2 hrs. However the efficiency of the calcination with the fluidized bed reactor was much lower. After modifications of the fluidized bed reactor, i.e., the addition of preheater, pack bed, increasing the height of bed and also optimized air velocity, the percentage of the calcination was improved to 94.93 at the temperature of 1000°C within 1 hr. The calcined dolomite was further used for the preparation of the magnesium compounds.