

ABSTRACT

Microwave processing has gained worldwide acceptance as a novel method for heating and sintering a variety of materials as it offers specific advantages in term of time saving, energy efficiency, improved properties and green environment. This paper reports the use of DOE method in characterizing the process factors for microwave sintered aluminum. The aluminum compacts be exposed to high intensity microwave fields, using a 2.45 GHz multi mode microwave sintering furnace. The result shows that sintering temperature was the most significant effects to the final density. Optimum theoretical density of 96.22% was obtained in 27 minutes.

Keywords: microwave sintering; aluminum; density