Supercritical Fluid Debinding

김동현, 임종성*, 유기풍 서강대학교 (limjs@sogang.ac.kr*)

The objective of this study was to suggest and to improve alternative debinding method as supercritical fluids debinding. Due to the features of supercritical fluid, no surface tension, gas-like viscosity and liquid like-density, our system has effective solubility and diffusivity through the porosity and dissolute dinber in short time. The effects of process variables such as pressure, temperature and flow rate of supercritical carbon dioxide on the binder removal rate in the ceramic injection molding have been investigated. Experimental results lead us to the conclusion that supercritical debinding save time and energy so the supercritical debinding can be alternative to the conventional debinding methods.