The effects of kaolin/PESF ratios on the microstructures of kaolin hollow tubes

Abstract

The effects of kaolin/polyethersulfone (PESf) (k/p) ratios on the microstructures of kaolin hollow tubes have been investigated. Kaolin suspension containing k/p ratios between 1 and 3.5 was used to spin kaolin hollow-tube precursors via a dry-jet wet spinning method at 0-cm air gap. The cross-sectional microstructures of the kaolin hollow-tube precursors were investigated using scanning electron microscopy (SEM). The results show that, at k/p ratios of 1.0, 1.5 and 2.5 (low viscosity) and k/p ratios of 3.0 and 3.5 (high viscosity), the finger like voids dominated the outer regions and inner regions of the cross sections of the kaolin hollow tubes, respectively.