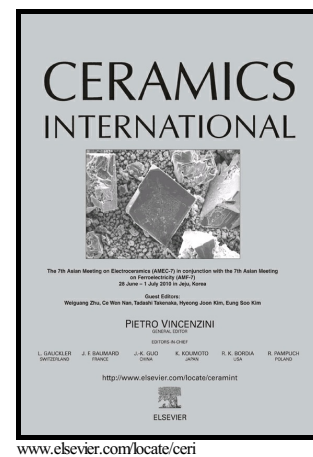


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Effects of solid loading on the fabrication of ceramic microparts by soft molding

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Abstract

The effects of solid loading on the fabrication of ceramic microparts by soft molding were studied. Alumina microchannel parts of different dimensions (60 to 160 μm) were fabricated from well-dispersed suspensions with different solid loadings (70, 75 and 80 wt.%). The structural integrity of the green microchannel parts was examined to study the moldability of the suspensions. It was found that the minimum feature size and linear shrinkage of the microchannel parts decreased with increasing solid loading, while the green density and sintered density showed the opposite trend. The reasons for incomplete filling and demolding failures were also discussed.

Keywords: A. Shaping; D. Al_2O_3 ; Microparts

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