

실리카 입자가 실리카/PEO 현탁액의 수축형
미세유로 내 와류거동과 유변물성에 미치는 영향

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In this study, the effect of silica particles on both rheological properties and their vortex behaviors in micro contraction channel flow of silica/PEO suspensions was investigated. It is important to understand the flow behaviors of viscoelastic fluid through the contraction geometry because the contraction is inevitable in many processes. Most viscoelastic fluids used in industry are simply polymeric solutions or melts but suspensions containing particles as well as polymers. However, there have rarely been researches on the interaction between polymer-particle and their vortex dynamics in complex geometry. Therefore, the effect of silica particle on vortex dynamics in contraction geometry flow of silica/PEO suspensions by comparing the rheological properties.