

Experimental Approach for Analyzing Process Conditions of Slot Coating of Yield Stress Fluid

이명재, 남재욱[†]

서울대학교

(jaewooknam@snu.ac.kr[†])

The coating process plays an important role in producing various products. In particular, the slot coating process has the advantages of being able to precisely control the wet thickness and easily obtain a flat film. Now one of the most important issues in the coating process is coating the solution with complex rheological properties. To do this, it must be done to accurately measure the rheological properties and to use them for process analysis.

Experimental and theoretical approaches are both necessary for researches combining slot coating and yield stress fluids. Firstly, the yield stress of the Carbopol 941 aqueous solution was measured. In addition, comparisons of process conditions of the glycerin-water solution, a Newtonian fluid, have been made to analyze how viscoplasticity affects the process conditions of slot coating.