

Slot 코팅 공정에서 유동 해석 및 조업 안정성 영역  
구축을 위한 3차원 수치모사와 실험 연구

이시현, 정현욱\*, 김시조<sup>1</sup>, 현재천  
고려대학교 화공생명공학과; <sup>1</sup>안동대학교 기계공학부  
(hwjung@grtrkr.korea.ac.kr\*)

Slot coating, which is one of pre-metered coating methods, is inevitably involved in producing high-precision coating products such as long-life secondary batteries and multi-functional films in displays. There have been many theoretical considerations and experimental observations to elucidate the slot coating flows in internal and external (coating bead) die regimes. In this study, we quantitatively compared the experimentally visualized flow behaviors with results by three-dimensional calculation of whole slot die regime from internal die to coating bead. It is clarified that there was a good agreement between simulation and experiment in operability coating window and flow characteristics.