

Development of Continuation Method for Tracking Steady Contours in Film Blowing Process

권일영, 이주성¹, 정현욱*, 현재천
고려대학교 화공생명공학과; ¹LG화학
(hwjung@grtrkr.korea.ac.kr*)

Pseudo arc-length continuation scheme has been implemented in Newton's numerical method for effectively solving complicated steady-states in viscoelastic film blowing processes. Various steady contours in both isothermal and nonisothermal cases with fixed freeze-line height have been obtained under constant bubble pressure or constant tension conditions. It turns out that the incorporation of single continuation equation into governing equation set is very efficient to successively track solutions with multiplicity.