

Theoretical and Experimental Investigation of the Zig-Zag Type of Interfacial Instabilities in Multi-layer Cast Film Process

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Modified Leonov model has been used for the viscoelastic stress calculation in the flat multi-manifold coextrusion die used for LDPE film casting process. It has been shown that specific type of high stress area occurs around the interface at the end of the converging section. This total stress has been found to be non-monotonic along the interface and related for the onset of zig-zag type of interfacial instabilities when the total stress achieved 200 kPa.