A B S T R A C T

The thesis deals with the flow pattern of viscoelastic fluids through the plate model of the screw extruder. The calculation are carried out up to fluids of third order.

The calculation showed that the velocity distribution for fluids of second order coinsides with that of fluids of first order. The third order fluid leads to modification of the velocity distribution. The distribution of third order velocity matches the experimental results in a better way than first order distributions. The extention of the present work to provid more realistic results to be compared with technical problems are discussed.