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## Flow of a polymer solution between two rotating rolls

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### Abstract

A new model of the film of a viscoelastic polymer solution based on the principles of mechanics of saturated porous media is suggested. The point of exit of the film from the gap is not prescribed as is done in traditional approaches but is determined from the condition of adhesion strength of the contact of the polymer with the rolls. An analytical solution of the stationary problem is obtained. Disturbances of this solution caused by periodic changes in the thickness of an incoming flow or a pulling rate are investigated.

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