

这反映出各试样的拉伸弹性和剪切弹性的差异。

(3)在先前工作的基础上,提出估算混炼胶挤出流动中剪切弹性模量的方程式,并预测了试样的 G 值。结果表明, G 与 τ_w 呈线性函数关系,且预测的 G 值与文献报道值相当接近。

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第11届全国轮胎技术研讨会论文

Analysis for viscoelasticity in extrusion flow of retread tire compounds

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Abstract: The viscoelastic behaviour and mechanism in capillary extrusion flow of three retread tire compounds (cavity stock, buffer stock and retread stock) were investigated. The results showed that under the operation conditions with the temperature of 90 °C and the apparent shear rate ($\dot{\gamma}_a$) of $1 \sim 10^3 \text{ s}^{-1}$, the shear flows of all three samples obeyed the power law and their non-Newtonian index values were close to each other; the entry pressure drop (ΔP_e) and the die swell ratio (B) increased nonlinearly with the increase of $\dot{\gamma}_a$; the B value for cavity stock was the highest, and that for buffer stock was the lowest, but it was contrary in terms of ΔP_e ; and the shear modulus (G) of the samples estimated by means of a die swell equation were the linear functions of the wall shear stresses, and close to those reported in previous literatures.

Keywords: rubber compound; viscoelasticity; extrusion flow

轮胎行业 2000 年增产增收不盈利

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轮胎分会统计的 58 家轮胎生产企业 2000 年轮胎产量增长较快, 销售收入有所提高, 而利润总额却出现赤字。

2000 年综合外胎产量和产值分别增长 11.7% 和 12.8%, 其中子午线轮胎增幅达

28.9%, 子午化率较上年增长 5.6%。轮胎出口保持强势, 实物交货量和交货值分别增长 38.1% 和 38.4%, 占综合轮胎产量的 31%, 出口比例比上年增加约 6%。轮胎销售收入增长 12%, 轮胎销售率上升 0.37%, 而实现利润总额却出现赤字, 为 - 4.95 亿元。

(本刊讯)