化和假设下进行的,而简化和假设越多,误差也就越大。尽管如此,在测试手段相对比较落后的国内轮胎行业,这不失是个可行的方法。笔者用上述实验结果计算了上轮公司正泰橡胶厂生产的 165R 16 轿车子午线轮胎的稳态温度场<sup>[8]</sup>,其计算结果有相当的可信性。

橡胶材料的热生成率(以及其它力学性能和热学性能)的确定是一项非常困难的工作,特别是国内轮胎企业,受各种条件的限制,在材料性能测试方面起步晚、进展慢,经验相对缺乏,因此本文介绍的轮胎所用各种材料热生成率的测定工作难免存在错误和欠缺。关于这方面工作的进一步改进,除了上述一系列假设和近似需要进一步探讨和改善、更多与热生成率有关的因素需要考虑外,试样的形状和尺寸也需要进一步研究,以进一步提高热生成率的测试精确程度。

## 参考文献

- Sarkar A new approach for the themomechanical analysis of tires by the finite element method Tire Sci and Tech., 1987; 15(4): 261
- 2 Clark Load, speed and inflation pressure effects on rolling loss distribution in automobile tires Tire Sci and Tech., 1988; 16(2): 78
- 3 Reed Heat build-up of dynamically loaded engineered elastomeric components Elastomerics, 1989; (2): 45
- 4 Yavari A themomechanical model to predict the temperature distribution of steady state rolling tires. Tire Sci. and Tech., 1993; 21(3): 163
- 5 B S Oh Internal temperature distribution in a rolling tire Tire Sci and Tech , 1995; 123(1): 11
- 6 Freakley, 杜承泽等译 橡胶在工程中应用的理论与实践. 北京: 化学工业出版社, 1985: 73, 558
- 7 蔡峨·粘弹性力学基础·北京: 北京航空航天大学出版 社, 1989: 50
- 8 陈振艺. 轮胎稳态温度场的计算. 轮胎工业, 1997; 17 (5): 273~ 277

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## Determination of Heat Build-up of Tire Materials

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Abstract The simplified conditions under which the heat build-up of all tire materials was determined were investigated. For providing the heat build-up characteristics of tire materials to calculating the temperature field of tire, the heat build-up of various materials in 165R 15 radial passenger car tire under different running conditions was determined assuming that the strain variate sinusoidally in a period, the viscoelasticity of materials be linear, the heat build-up of rubber be isotropic, and the strain component of rubber/cord composite perpendicular to the calender direction be negligible

Keywords tire, rubber, heat build-up, hysteresis

## 桦林集团开发斜交轮胎索赔管理软件

最近, 桦林集团有限责任公司计算机中心完成了斜交轮胎索赔管理软件开发设计工作。 该系统可以从轮胎规格 生产时间 生产单位 损坏原因等方面进行索赔轮胎的统计

便于索赔轮胎的技术分析。据悉,该公司斜交轮胎索赔管理软件的开发应用,将提高办公自动化程度,使管理工作更具科学性、系统性。

(本刊讯)