

- [2] 刘丽, 宋君萍, 何燕, 等. 轮胎胶料导热系数测定及误差分析[J]. 轮胎工业, 2006, 26(4): 240-242.
- [3] 何燕, 马连湘, 黄素逸, 等. 轮胎橡胶材料导热系数的测定分析[J]. 橡胶工业, 2004, 51(4): 366-368.
- [4] 王军, 杨许召, 吴诗德, 等. 离子液体的性能和应用[M]. 北京: 中国纺织出版社, 2007: 5.
- [5] 刘波平, 周妍, 罗香, 等. 离子液体溴代1-丁基-3-甲基咪唑盐合成的红外光谱分析[J]. 现代测量与实验室管理, 2007, 3: 13-14.

## Application of Environmentally Friendly Heat Conductive Additive TB-100 in LTR Tire Compound

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**Abstract:** The application of environmentally friendly heat conductive additive TB-100, which is ionic liquid 1-butyl-3-methyl imidazole chloride modified highly dispersible silica, in LTR tire compound was investigated. The experimental results showed that, with conductive additive TB-100, the tensile strength, elongation at break and tear strength of tread compound, base compound and sidewall compound increased slightly, and the abrasion loss of tire tread compound was reduced. The thermal conductivities of those tire compounds were significantly increased, and thus early damage of the tire due to high temperature of hot spots was reduced. It was demonstrated that the endurance performance and high speed performance of the finished tire were significantly improved.

**Keywords:** heat conductive additive; 1-butyl-3-methylimidazolium chloride; ionic liquid; highly dispersible silica; thermal conductivity; LTR tire; tread compound; base compound; sidewall compound



### 日本电气化学在千叶新建乙炔炭黑厂

随着混合动力汽车及电动车的发展, 高压电力电缆和锂离子电池等对超导电乙炔炭黑的需求日益增长。为了满足用户需求, 日本电气化学工业株式会社正在日本千叶县新建1个乙炔炭黑工厂。新厂邻近公司现有石化工厂, 占地4000 m<sup>2</sup>, 预计于2015年春季投产。公司Denka Black乙炔炭黑具有高导电性和高导热性, 用于轮胎胶囊时与其他炭黑相比具有绝对优势。

日本电气化学是全球领先的轮胎胶囊、氯丁橡胶及乙炔炭黑生产商, 总部设在东京, 创立已近百年, 生产乙炔炭黑已有70年的历史。目前公司在日本有数家炭黑工厂, 在新加坡有2个工厂(其中1个生产乙炔炭黑), 在中国有1个工厂。公司业务分为4个模块: 弹性体和高性能塑料, 基础材料与无机材料, 电子创新产品, 生命科学与环保产品。

宇虹