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Comparative Study on Properties of IIR Filled with Silica and Diatomite

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Abstract: The effects of silica and diatomite on the processability, physical properties and dynamic mechanical property of IIR were investigated. The results showed that, compared with diatomite, as the processing time extended, the processability of IIR compound filled with silica was better, the Shore A hardness and tensile strength of the vulcanizate were higher, and the elongation at break was lower. The storage modulus (E') of IIR vulcanizate filled with silica at low temperature was higher, while the E' of IIR vulcanizate filled with silica and diatomite at high temperature was similar. When the frequency range was 0.1~200 Hz, for the silica filled IIR vulcanizate, the loss factor was higher, and the E' at low frequency (<150 Hz) was lower, while the E' at high frequency (≥ 150 Hz) was higher.

Key words: IIR; silica; diatomite; processability; physical property; dynamic mechanical property

雷克萨斯LC500配备米其林 跑气保用轮胎首次亮相

中图分类号:TQ336.1 文献标志码:D

美国《现代轮胎经销商》(www.moderntiredealer.com)2016年1月12日报道:

雷克萨斯LC500豪华运动轿跑车配备米其林Pilot超级运动轮胎ZP(见图1)在底特律北美国际汽车展上首次亮相。

这是米其林北美公司的工程师首次使用新的复合胎侧技术,使轮胎保持跑气保用和优异的操控性能,同时减小轮胎的总质量、降低滚动阻力。



图1 米其林Pilot超级运动轮胎ZP

米其林称,面向全新雷克萨斯LC500车型,经过特殊定向设计的Pilot超级运动轮胎ZP旨在显著提升操控和使用性能。在紧张研发阶段,该项目拥有超过1 200条原型轮胎,在南卡罗莱纳州格林威尔和法国Ladoux的米其林工厂、日本Higashifuji试验场和日本汽车研究所进行了长时间测试。

“米其林全球研发团队与雷克萨斯团队密切合作,研发Pilot超级运动轮胎,以期雷克萨斯LC500提供所需的高性能和安全性。”米其林北美原配胎销售副总裁Thom Roach说,“车主可在不牺牲车内安静环境和舒适驾乘体验的前提下安心享受米其林跑气保用技术,这是米其林车主所重视的。”

特别为北美国际汽车展设计的米其林Pilot超级运动概念轮胎具有优质的胎侧触感技术。此款特殊的轮胎融合了来自雷克萨斯品牌设计语言的元素,可以提升LC500在展览上的美感。优质触感技术使用专有模具雕刻工艺,生产出具备较好的美学对比和高档丝绒质地的产品。

(孙斯文摘译 吴秀兰校)