

求,滚动阻力、通过噪声和抗湿滑指数分别达到了ECE R117法规的B, II 和B级。

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Application of Highly Dispersible Silica Filled High Styrene SSBR Composite in Tread Compound of Electric Vehicle Tire

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Abstract: The application of four high styrene solution polymerized styrene butadiene rubber (SSBR) / highly dispersible silica composites in the tread compound of electric vehicle tires was comparatively studied. The results showed that the filler dispersion of SSBR KC3737T/silica 9100GR composite was the best. The wear resistance and wet slip resistance of SSBR F3438K/silica 9100GR composite were the best, and its rolling resistance was the lowest. The high speed performance and durability of the tire produced with the SSBR F3438K/silica 9100GR composite met the requirements of national standards, and the rolling resistance coefficient, passing noise and wet slip resistance index reached the B, II and B levels of ECE R117 regulations, respectively.

Key words: SSBR; highly dispersible silica; electric vehicle tire; tread compound; wear resistance; dynamic mechanical property

一种低生热轮胎的胎面胶、制备方法、应用和低生热载重子午轮胎

由中策橡胶集团股份有限公司申请的专利(公布号 CN 115678122A, 公布日期 2023-02-03)“一种低生热轮胎的胎面胶、制备方法、应用和低生热载重子午轮胎”,涉及一种低生热轮胎胎面胶、制备方法、应用和低生热载重子午线轮胎。轮胎胎面胶中天然橡胶占比(质量分数)36%~66%;合成橡胶占比0%~15%;炭黑占比15%~35%;白炭黑占比0%~15%,白炭黑与

硅烷偶联剂质量比为(10:1)~(10:3);硫化剂占比1%~4%,硫化剂中硫黄/促进剂质量比为(1:1)~(1:3);液体橡胶占比2%~15%。硫化后的交联网络结构如下:单硫键占比5%~15%,双硫键占比15%~30%,多硫键占比60%~75%;总交联密度为 $15 \times 10^{-5} \sim 22 \times 10^{-5} \text{ mol} \cdot \text{cm}^{-3}$ 。该胎面胶通过控制胶料的组合物体系、硫化体系和硫化条件,从微观结构上设计交联网络结构密度及其键型分布,在保证耐磨性能的基础上降低生热。

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