

量分数约为0.60的包覆物。包覆物为球形,表面均匀覆盖长度为100 nm左右的六方柱状氧化锌。

(2) 在NR中用2份氧化锌包覆物等量替代间接法氧化锌,胶料的硫化特性和物理性能相当。

在胶料中用氧化锌包覆物等量替代间接法氧化锌,氧化锌净用量相对减小,在减小胶料密度、降低胶料生产成本的同时,减小重金属对环境的影响,具有显著的经济效益和社会效益。

参考文献:

- [1] 陈志宏. 关于我国轮胎工业循环经济发展的浅见[J]. 中国橡胶, 2005, 21(2): 3.
- [2] Shi J Z, Cao Q X, Wei Y G, et al. ZnO Varistor Manufactured by

Composite Nano-additives[J]. Materials Science and Engineering B, 2003, 99(1): 344-347.

- [3] 王金敏, 高谦. 纳米氧化锌的沉淀法制备、表征及影响因素分析[J]. 无机材料学报, 2003, 19(6): 1357-1361.
- [4] 张宪玺, 王晓娟, 翟冠杰, 等. 碱式碳酸锌煅烧制备纳米氧化锌[J]. 无机化学学报, 2002, 18(100): 1037-1041.
- [5] 陈四海, 任新民. 乙醇溶液中氧化锌纳米粒子的形成机理研究[J]. 无机化学学报, 1999, 15(2): 171-173.
- [6] Chen Y F, Bagrall B, Yao T. ZnO as a Novel Photonic Material for the U V Region[J]. Materials Science and Engineering B: Solid, 2000, 75(2-3): 190-198.
- [7] Yoon D H, Yu J H, Choi G M. CO Sensing Properties of ZnO-CuO Composite[J]. Sensor and Actuators B: Chemical, 1998, 46(1): 15-23.
- [8] 赵旭, 杨少凤, 赵敬哲, 等. 氧化锌包覆超细二氧化钛的制备及其紫外屏蔽性能[J]. 高等化学学报, 2000, 21: 1617-1620.

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Preparation of Zinc Oxide Coated Filler and Its Application in Natural Rubber

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Abstract: In this study, zinc oxide coated filler was prepared and its application in natural rubber (NR) compound was investigated. The zinc oxide coated filler was prepared by direct precipitation with calcium carbonate and magnesium carbonate as a core material and the mass fraction of the coated zinc oxide was 0.60. Zinc oxide coated filler was in a spherical shape, coated zinc oxide showed hexagonal column structure and its average length of zinc oxide was 100 nm. When the same amount of zinc oxide coated filler was applied to replace regular zinc oxide in the NR compound, the density of the compound was slightly reduced, and the curing characteristics and physical properties were kept unchanged.

Key words: zinc oxide; coating; shell; core; natural rubber

固特异开发超抓着性能冬季SUV轮胎

中图分类号: TQ336.1 文献标志码: D

固特异公司已扩建其超抓着性能冬季轮胎生产线, 增加新一代(Gen-1)3个超抓着性能冬季SUV轮胎。

与上一代的超抓着性能冬季SUV轮胎相比, Gen-1超抓着性能冬季SUV轮胎的咬合式细花纹和胎面结构是其技术亮点, 其抓着性能明显提高, 在冰雪路面上行驶更安全。Gen-1超抓着性能冬季SUV轮胎的特点如下。

(1) 咬合式细花纹。坚韧的花纹块可以提高轮胎在干路面的操纵性能, 屈挠性能好的细花纹块

可以提高轮胎在冰雪路面上的抓着性能。为赋予花纹块坚韧性能和屈挠性能, 本设计咬合式细花纹采用了固特异的3D花纹块咬合系统(3D BIS)技术, 较好平衡了轮胎在干路面的操纵性能和冰雪路面的抓着性能。

(2) 花纹块倾斜设置。本设计花纹块倾斜设置, 与以前的直线设置花纹块相比, 其轮胎在雪地路面的抓着性能、制动性能和牵引性能提高。

(3) 接地印痕较大。本设计采用固特异的有有效抓着力(ActiveGrip)技术, 胎面宽度和接地印痕较大, 轮胎行驶稳定性较好。

(谢立)