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Investigation on Mill Mixing Technology of Silica Reinforced Compound(Ⅱ) ——Solution-polymerized Styrene-Butadiene Rubber

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Abstract: A mill mixing technology of solution-polymerized styrene-butadiene rubber reinforced with silica was designed and investigated experimentally. The heat treatment of first-stage mix (i. e. silylation reaction) was carried out in the ageing oven rather than on high temperature mill in traditional three-step mixing process. The effect of the heat treatment time on property of the compound was studied. The results showed that, this mixing technology was a safe and effective process, in which the time and temperature of heat treatment could be precisely controlled, while the shear breakdown of the compound because of mixing at high temperature was avoided. The properties of the obtained vulcanizates were comparable to that using internal mixer.

Key words: silica; solution-polymerized styrene-butadiene rubber; mill; mixing; tread compound

东洋发布 Versado Noir 轮胎

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美国《现代轮胎经销商》(www.moderntire-dealer.com)2014年9月8日报道:

东洋轮胎美国公司的新东洋 Versado Noir 产品是适用于轿车和跑车的优质全天候旅行轮胎,设计有所突破,其胎面寿命长,燃油效率高,并且在整个轮胎生命周期中保持优异的驾乘舒适性。

为提高雪地性能, Versado Noir 轮胎的刀槽花纹延伸至胎面外侧的主槽,如图1所示。

“我们的新 Versado Noir 轮胎为当下许多受欢迎的车辆提供无与伦比的奢华、长寿命和全天候性能”,首席运营官 Roy Bromfield 说。

该 Versado Noir 轮胎新专利白炭黑配方可延长其使用寿命,同时提高湿地性能和燃油效率。东洋的胎面沟槽静音墙技术可降低路面噪声。

Versado Noir 轮胎独特的非对称胎面花纹所具有的刚性外侧花纹块可作为消音器,并稳定胎面,改善磨损性能同时提升响应能力。胎面的内



图1 东洋的新 Versado Noir 轮胎

侧部分具有较高的刀槽花纹密度,以进一步提高雨、雪路面的牵引性能。

多波形刀槽花纹是 Versado Noir 轮胎设计中的另一个复杂结构,这些互锁的刀槽花纹可减少胎面花纹块的运动,并保证更大面积的胎面与路面接触,减少不规则磨损,提高湿地和干地性能。轮胎适用于大多数流行轿车,轮辋直径为15~18英寸,配有120 700 km(75 000英里)的里程担保,同时可享受有东洋轮胎45天/804 km(500英里)的试用期。

(孙斯文摘译 吴秀兰校)