

tion control method (DCM) and optimized by finite element analysis (FEA). The finished tire was tested comparing with an international brand tire. Based on the characteristics of high load, large instantaneous stress and very harsh road conditions, the tire profile in inflating state, stress at the belt end, and the stress and strain of the tire bead should be controlled in the design. The FEA results showed that, under different load, the trend of profile change was consistent with the DCM design, and the maximal stress position was always around the belt end in tire shoulder. The measurement results showed that, under the standard inflation pressure, with the increase of loading rate, the trend of profile change of DCM finished tire was similar to that of the international brand tire, but the international brand tire had smaller tread deformation, less drop of the horizontal axis position, and bigger lateral deformation rate of sidewall under large load. The application test results showed that the life of DCM finished tire reached about 70% of the international brand tire.

**Keywords:** all-steel giant off-the-road radial tire; profile design; deformation control method; finite element analysis

## 倍耐力静音轮胎成为奥迪

### RS6 和 RS7 原配胎

中图分类号: TQ336.1 文献标志码: D

美国《现代轮胎经销商》(www.moderntire-dealer.com)2013 年 7 月 17 日报道:

倍耐力的“降噪系统”技术轮胎(如图 1 所示)成为奥迪 RS6 和 RS7 车型原配胎。



图 1 倍耐力“降噪系统”技术轮胎

倍耐力 Pirelli & Cie 公司开发出了为奥迪集团设计的新型轮胎,可减少车内噪声。这是位于米兰的倍耐力公司第 1 次提供倍耐力“降噪系统”原配胎,可降低轮胎行驶噪声。这种噪声是轮胎挤压路面时被压缩的空气振动所引起的,噪声从轮胎传到轮毂,最终通过操纵和悬架系统传到车内。

倍耐力“降噪系统”在轮胎内部使用聚氨酯海绵,以吸收振动,从而减少车内噪声。它可使噪声降低 2~3 dB,改善了驾乘舒适性。

倍耐力的研究测试证明,这种降低噪声的海绵对轮胎其他特性没有任何影响。

倍耐力称,这项技术引入原配胎,迎合了汽车

界对降低汽车内部和外部噪声不断增长的需求,并满足欧洲最新法规关于减少噪声污染的要求。

倍耐力“降噪系统”轮胎已成为奥迪 RS6 和 RS7 原配胎,轮胎规格分别为 285/30ZR21 和 275/30ZR21。使用该系统的轮胎在胎侧标识有“PNCS”。

(吴淑华摘译 李静萍校)

## 轮胎硫化机装胎机构抓胎器

中图分类号: TQ330.4+7 文献标志码: D

由桂林橡胶机械厂申请的专利(公开号 CN 202640623U,公开日期 2013-01-02)“轮胎硫化机装胎机构抓胎器”,涉及的轮胎硫化机装胎机构抓胎器包括同轴设置的固定盘和转动盘、以及由转动盘控制爪片张合的抓放胎机构。抓放胎机构包括推杆、连杆和滑套,滑套于固定盘内滑动安装于径向导杆上,竖状推杆滑动配合于滑套内,推杆上端置于转动盘上开设的弧形槽内,爪片的片体铰装于向下伸出固定盘的推杆下端,设于推杆外侧的连杆下端铰连爪片主动端,爪片的从动端为爪头,连杆上端铰连滑套;转动盘置于与固定盘同轴设置的升降气缸缸体上。该设备利用升降气缸作为动力,推动抓胎器爪片实现张开闭合动作,平稳可靠,没有偏心力矩,保证了抓胎器转动盘的平行度和抓胎器动作的重复精度。

(本刊编辑部 马 晓)