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## Application of RFID Electronic Tag in All-steel Radial Tire

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**Abstract:** The application of two kinds of radio frequency identification (RFID) electronic tags, implanted and internal tags, in all-steel radial tire was studied. The results showed that the implanted RFID electronic tag was reliable, and the self-developed compound formulation for the implanted RFID electronic tag would not affect the performance of the electronic tag and the quality of the tire. The suitable implantation positions of the implanted RFID electronic tag were the carcass turn-up end and the outer part of the apex rubber. It was verified that the implanted RFID electronic tag would not affect the quality and service performance of the finished tires through visual check, internal quality inspection, indoor bench test and road test. On the other hand, when the internal RFID electronic tag was used for the tire with inner tube, the phenomenon of displacement and detachment occurred during the indoor bench test, and the reliability needed to be further verified.

**Key words:** all-steel radial tire; RFID electronic tag; radio frequency identification; implanted tag; internal tag; reliability

普利司通携手陶氏化学推出新型  
轮胎密封胶

普利司通(美洲)公司(以下简称普利司通)与陶氏化学公司(以下简称陶氏化学)合作开发出一种可回收的有机硅轮胎密封胶B-SEALS。该技术解决方案是两家公司4年多的联合研发成果。

据悉,B-SEALS可在轮胎被穿刺时提供出色的密封性能,而且不会影响轮胎的可持续性。与难以与轮胎分离的传统密封胶不同,这种基于有机硅的新型密封胶使用后可以被有效去除和回收,从而提高轮胎的可修复性,延长轮胎的使用寿命,实现轮胎材料的循环使用。

目前,美国销售的新乘用车中约有1/3未配

备备用轮胎,这导致对自密封和补气保用轮胎技术等扩展出行解决方案的需求增大。普利司通表示,随着越来越多的电动汽车进入市场,初期将向寻求车辆轻量化并提高整体效率的汽车制造商提供采用B-SEALS技术的轮胎。

B-SEALS是普利司通努力实现其2050年碳中和及轮胎由100%可再生材料制成的可持续发展目标的最新成果。与陶氏化学合作开发B-SEALS技术符合普利司通对更可持续发展世界的E8(Energy, Ecology, Efficiency, Extension, Economy, Emotion, Ease, Empowerment)承诺。

(朱永康)