

## Improvement of Material Conveying System for Compound Mixing

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**Abstract:** In this study, the traditional conveying system for compound mixing was improved. With the traditional system, raw materials of compound mixing workshop were transported to each floor through the elevator, and then transported by the operator to the mixing machine by hand hydraulic carrier and forklift. The material conveying process was cumbersome with a large load on the elevator and the logistics cost was high. In the improvement, automation system was adopted, in which raw rubber was transported by the reciprocating lifting system, the numbers of workshop equipment and logistics staff were reduced, the logistics layout was also optimized, and the technological process was streamlined. After the improvement, the production efficiency and safety were improved and the economic benefit was good. The improved system was in line with the development direction of modern logistics for tire manufacturers.

**Key words:** compound mixing; material conveying system; logistics layout; reciprocating lifting; roller conveyor

### 玲珑轮胎芳纶在高性能子午线轮胎中的应用 技术项目通过国家科技支撑计划项目验收

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2016年12月8日, 山东玲珑轮胎股份有限公司(以下简称玲珑轮胎)的芳纶在高性能子午线轮胎中的应用技术项目通过科技部高新司组织的“十二五”国家科技支撑计划——化工行业绿色生产工艺集成应用示范项目验收。

玲珑轮胎开发了芳纶载重子午线轮胎的结构设计技术, 生产的代表规格产品质量减小了13.2%, 按照欧盟标签法规检验, 滚动阻力系数达到B级, 与同规格普通全钢子午线轮胎相比滚动阻力下降了17%, 抗湿滑性能达到B级, 噪声达到2级, 汽车油耗降低3.1%; 开发了轿车子午线轮胎用嵌入式电子束预硫化设备, 已在现有纤维帘布压延生产线上应用, 填补了国内空白, 该技术提升了帘线排布精度, 减小了轮胎质量, 生产的225/40R18规格轮胎高速性能达到 $300 \text{ km} \cdot \text{h}^{-1}$ , 耐久性能达到160 h。目前, 该课题已申报国内外专利10项。

多年来, 玲珑轮胎坚持走自主研发、自主品

牌、自主知识产权道路, 致力于产品研发升级和结构调整, 承担了国家“863”计划和火炬计划等多项国家级技术攻关课题, 主导和参与制定及修改了近60项国家及行业标准, 取得300多项国内外专利, 在技术创新领域先后创造了6项企业新纪录和8个国内第一, 形成了一批行业领先、国内一流的关键技术和高新技术产品。

(本刊编辑部)

### 化工行业鞋类新标准

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全国橡胶与橡胶制品标准化技术委员会胶鞋分技术委员会(SAC/TC35/SC9)提供的2017年1月1日起执行的化工行业鞋类新标准如下: HG/T 4990—2016《胶鞋扭转性能和漆膜伸长率试验方法》, HG/T 4992—2016《慢跑胶鞋》, HG/T 4993—2016《鞋用微孔材料回弹试验方法》, HG/T 4994—2016《休闲胶鞋》, HG/T 4995—2016《胶鞋 运动鞋附件 鞋眼》, HG/T 4996—2016《举重鞋》, HG/T 4997—2016《鞋眼拔出力试验方法》。

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