

论依据和技术支持。

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Structural Design and Simulation Analysis of a Novel Tire Curing System with Multiple Movable Mold Parts

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Abstract: A novel tire curing system with multiple movable mold parts was designed, and its simulation model was established by using Flexsim software. The feasibility and production operation condition of overall project were discussed. Based on that, the models for conventional single mold machine and the new machine were built. Then the curing process for the truck and bus radial tire 8.25R20 S711 was simulated under the same condition, and the production efficiency and equipment cost were compared between the conventional and new systems. The results showed that the novel tire curing system with multiple movable mold design was completely feasible for the vulcanization of truck and bus radial tire. Compared with conventional single mold vulcanizing machine group under the same condition, the novel tire curing system with multiple movable mold parts could use significantly less production space, reduce labor and infrastructure cost, and improve the automation level for production.

Key words: radial tire; tire curing system with multiple movable mold parts; structural design; analogue simulation

一种抗静电粉末氯丁橡胶的制备方法

中图分类号: TQ333.5; TQ333.99 文献标志码: D

由中国石油天然气股份有限公司申请的专利(公开号 CN 102952302A, 公开日期 2013-03-06)“一种抗静电粉末氯丁橡胶的制备方法”, 提供了一种采用直接凝聚粉末化技术制备抗静电粉末氯丁橡胶的方法, 包括以下步骤: (1) 淀粉改性。在反应瓶中加入水和淀粉, 搅拌加热, 交替滴加碱液和二元酸, 待反应结束时调节 pH 值至一定值, 制得改性淀粉。(2) 接枝胶乳制备。在聚合釜中

依次加入氯丁胶乳、水、改性淀粉、抗静电剂、相对分子质量调节剂, 搅拌加热, 加入引发剂和活化剂, 当接枝聚合转化率达一定值时, 加终止剂, 制得接枝胶乳。(3) 凝聚成粉。在凝聚釜中依次加入接枝胶乳、隔离剂、絮凝剂、凝聚剂, 搅拌、熟化、脱水、干燥制得产品。该抗静电粉末氯丁橡胶粒径为 0.50~1.00 mm, 成粉率不小于 99.5%, 挥发分质量分数不大于 1.5×10^{-3} , 抗静电电阻为 106~109 Ω , 起电电压小于 100 V。

(本刊编辑部 赵敏)