

Application of Zinc Oxide RA and NC-05 in Tread Compound of Truck Tire

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Abstract: The application of zinc oxide RA and NC-105 in tread compound of truck tire was studied. The results showed that by using zinc oxide RA to replace an equal amount of regular zinc oxide (mass fraction 0.997), the compression heat build-up of the tread compound was slightly lower, and the durability and high-speed performance of the finished tire were the same. By using less amount of zinc oxide NC-105 to replace regular zinc oxide, the processing properties of the tread compound were improved, wear resistance and heat aging resistance were improved, the compression heat build-up was reduced, and the durability and high-speed performance of the finished tire were improved. With zinc oxide RA and NC-105 replacing regular zinc oxide in the tread compound, the heavy metal content and zinc content were effectively reduced, and the tire production cost was also reduced.

Key words: zinc oxide; truck tire; tread compound

沈阳化工大学开发成功杜仲橡胶 自修复弹性体材料

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杜仲橡胶是特殊功能型生物高分子材料,不仅具有优异的耐疲劳性能、耐磨性能、耐酸碱性能,而且具有形状记忆特性,对其接枝改性后可获得自修复能力。

沈阳化工大学开发出杜仲橡胶自修复功能弹性体材料:通过向杜仲橡胶中引入大量的动态

可逆离子或化学键,赋予其犹如生命组织体的固有自修复功能,其修复效率可达90%以上(如图1所示)。

杜仲橡胶自修复弹性体材料可应用于机器人、电动汽车用锂离子电池和人造肌肉,不仅可以自动修复其使用过程中的损耗,而且可以延长相应产品或部件的使用寿命和降低成本。该材料可广泛应用于航空航天、国防、汽车、船舶和医疗等领域。

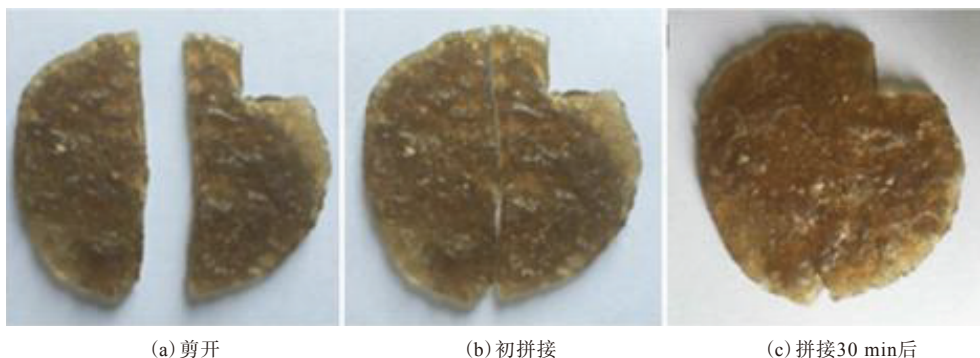


图1 杜仲橡胶自修复功能弹性体材料的自修复功能

(本刊编辑部)

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