

从表2可以看出,硫化工艺改进后轮胎硫化最薄弱点、轮胎胎侧外表面和轮胎内表面总硫化程度均显著降低,降幅分别为57%,32%和48%。

5 成品轮胎性能

对硫化工艺改进前后的成品轮胎进行室内机床TKPH (Ton Kilometer per Hour,每小时吨千米)及耐久性能测试^[3]。测试结果表明,硫化工艺改进后轮胎TKPH值由405提升至448,提升了10.6%,耐久时间由291 h 延长至345 h,耐久性能提升了18.6%。

6 结论

对27.00R49巨型工程机械子午线轮胎进行双

内/外温硫化工艺改进后,总硫化时间延长20 min;轮胎硫化程度明显降低,其中轮胎硫化最薄弱点、轮胎胎侧外表面和轮胎内表面总硫化程度分别降低57%,32%和48%;轮胎TKPH值提升10.6%,室内耐久性能提升18.6%。

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Improvement on Dual Temperature Stage Vulcanization Technology of Giant Off-The-Road Radial Tire with Both Inner and Outer Heating

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Abstract: The vulcanization technology of 27.00R49 giant off-the-road radial tire was improved by using two temperature stage vulcanization process with both inner and outer heating. The inner hot water temperature changed from a single stage of 160 °C to the two stages of 173 and 140 °C. The high and low temperature of outer steam was also adjusted from 145 and 130 °C to 135 and 125 °C, respectively. The results showed that, after the improvement, the total curing time was prolonged by 20 minutes, the curing degree of tire decreased significantly, specifically, the curing degree of the blow point, the surface of the sidewall and inner surface of tire decreased by 57%, 32% and 48% respectively, the TKPH value of tire increased by 10.6%, and the durability increased by 18.6%.

Key words: giant off-the-road radial tire; vulcanization technology; TKPH; durability

一种充气轮胎

由正新橡胶(中国)有限公司申请的专利(公开号 CN 110239286A,公开日期 2019-09-17)“一种充气轮胎”,其主胎面上有若干胎块,胎块上具有沿主胎面的两侧边缘部至其中部延伸的横向细刀槽花纹,以主胎面的周向中心线为基准,位于该周向中心线同侧的各横向细刀槽花纹沿主胎面的周向平行分布,且位于该周向中心线两侧的各横向细刀槽花纹错位交叉排列;横向细刀槽花纹包括位于其内端部的内端槽段、位于其外端部的

外端槽段以及沿其延伸方向顺次连通于内端槽段与外端槽段之间的中部槽段,内端槽段和外端槽段分别为直线槽花纹或简单曲线槽花纹中的任一种,且至少有一个中部槽段为波浪槽花纹,其余中部槽段为直线槽、简单曲线槽或波浪槽花纹中的任一种。

该充气轮胎在干、湿地及雪地路况下的行驶性能优良,能够充分满足车辆四季路况的行驶需求。

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