

表5 大配合试验胶料的物理性能

项 目	试验配方						生产配方					
硫化时间(143℃)/min	20	30	40	50	90	120	20	30	40	50	90	120
邵尔A型硬度/度	58	59	61	62	62	62	59	59	60	62	62	61
300%定伸应力/MPa	9.0	9.7	10.9	10.9	10.6	10.2	9.2	9.3	10.0	10.4	9.5	10.0
拉伸强度/MPa	22.9	22.3	23.3	22.0	22.8	22.0	22.0	22.3	21.0	21.6	20.0	20.0
拉断伸长率/%	570	555	520	530	520	518	560	535	542	520	500	480
拉断永久变形/%	27	27	26	24	23	23	30	29	27	25	26	23
回弹值/%				51						48		
100℃×48h老化后												
邵尔A型硬度/度	61	61	63	63	63	64	62	62	65	65	65	66
300%定伸应力/MPa	10.6	10.7	10.8	11.0	11.0	10.5	10.0	10.5	11.2	10.9	10.9	10.9
拉伸强度/MPa	21.0	21.9	21.4	21.0	21.8	21.0	20.3	20.6	20.7	21.4	19.2	17.9
拉断伸长率/%	520	520	520	500	506	490	507	490	490	480	455	450
拉断永久变形/%	22	21	20	17	15	15	20	22	19	18	15	9
回弹值/%				50						47		

能均提高,肩空率降低。

3 结论

(1)添加热稳定剂HS-80的胎肩胶抗硫化返原性能明显提高。

(2)添加热稳定剂HS-80的胎肩胶的拉伸性能、弹性和耐热老化性能提高,特别是硫化时间较长(>50 min)时,这个趋势更明显。

表6 成品轮胎性能

项 目	试验轮胎	生产轮胎
耐久性能/h	117	100
高速试验通过速度/(km·h ⁻¹)	110	90
1 000条轮胎实际里程试验结果 ¹⁾	肩空5条	肩空40条

注:1)试验地为印度尼西亚。

(3)添加热稳定剂HS-80的胎肩胶制备的成品轮胎耐久性能和高速性能提高,肩空率下降。

收稿日期:2017-08-06

Application of Heat Stabilizer HS-80 in Shoulder Compound of Truck Tire

JIANG Huaxue, HE Xiaodong, WEI Chunli

(Sichuan Haida Rubber Group Co., Ltd., Jianyang 641402, China)

Abstract: The application of heat stabilizer HS-80 in the shoulder compound of truck tire was studied. The results showed that the anti-reversion property of the compound was improved with the addition of heat stabilizer HS-80, and the tensile properties, elasticity and heat aging resistance were improved, especially for the compound with long vulcanization time (>50 min). With the addition of heat stabilizer HS-80 in the shoulder compound, the durability and high-speed performance of the finished tire were improved, and the tire shoulder separation defect was reduced.

Key words: heat stabilizer; truck tire; shoulder compound; tire shoulder separation; anti-reversion property

阿波罗开发特种环氧化天然橡胶

中图分类号:TQ332 文献标志码:D

阿波罗轮胎公司与印度橡胶研究所(RRI)合作开发了一种特殊品级的环氧化天然橡胶(ENR),这种橡胶可用于轮胎,该技术已获得印度政府的专利授权。

这种特殊品级ENR能够替代价格较高的溶聚丁苯橡胶(SSBR),广泛用于包括冬季轮胎在内的高性能轮胎。阿波罗表示,公司鼓励开发创新、可持续发展的技术。这一创新成果是公司致力于以更环保的天然材料替代合成材料的结果。

(安琪)