

AK-1环保型氧化锌用量增大,老化后硫化胶的拉伸强度变化率和拉伸伸长率变化率减小,这可能是因为AK-1环保型氧化锌起到热稳定剂的作用,硫化胶的耐老化性能提高;当AK-1环保型氧化锌用量为3份时,硫化胶的综合性能较好。

3 结论

(1) 与添加纳米氧化锌的胶料相比,添加AK-1环保型氧化锌的胶料 t_{10} 和 t_{90} 明显延长, $F_{\max}$ 增大,具有较好的加工性能,硫化速度减慢,交联密度增大。

(2) 随着AK-1环保型氧化锌用量增大,硫化胶的耐老化性能提高;当AK-1环保型氧化锌用量

为3份时,硫化胶的综合性能较好。

(3) AK-1环保型氧化锌可以等量替代纳米氧化锌应用于输送带覆盖胶中,同时减少50%左右锌用量。

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Application of Environmentally Friendly Zinc Oxide AK-1 in Cover Compound of Conveyor Belt

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Abstract: The effect of the amount of environmentally friendly zinc oxide AK-1 on the properties of the cover compound of conveyor belt was investigated, and compared with the existing nano zinc oxide. The results showed that, compared with the compound with nano zinc oxide, the t_{10} and t_{90} of the compound with zinc oxide AK-1 were obviously prolonged, $F_{\max}$ increased, processing property was better, and the wear resistance and aging resistance of the vulcanizate were improved. With the increase of zinc oxide AK-1 amount, the aging resistance of the vulcanizate was improved. When the zinc oxide AK-1 amount was 3 phr, the comprehensive performance of the vulcanizate was good. The results demonstrated that zinc oxide AK-1 could be used in the cover compound of conveyor belt to replace nano zinc oxide and reduce zinc amount.

Key words: conveyor belt; cover; environmentally friendly zinc oxide; nano zinc oxide; abrasion resistance; aging resistance

世界天然橡胶产量下降

据天然橡胶生产国协会(ANRPC)统计,2019年第1季度,世界天然橡胶(NR)产量为299万t,较2018年同期的315万t下降5.2%;NR消费量同比下降0.4%至338万t,消费量降幅远小于产量降幅;NR价格有所上涨,在1.45美元·kg⁻¹左右波动,但NR价格涨幅与原油价格涨幅并不相称。

ANRPC秘书长Nguyen Ngoc Bich表示,产胶国漫长的冬季、部分国家NR价格低迷导致NR产量下滑,印度尼西亚南苏门答腊发生的新落叶病病

害也对NR产量产生了不利影响,全球经济面临的不确定性也会波及到NR市场。

ANRPC报告显示,2019年第1季度,世界最大产胶国泰国的NR产量为102万t,同比下降17.6%;马来西亚的NR产量同比增长13.6%,从16.5万t增至18.7万t;柬埔寨和越南的NR产量也有大幅增长,增幅分别为36.8%和15.9%。ANRPC指出,尽管中国NR需求量为133万t,仅增长0.5%,但仍然占全球NR总需求量的近40%。

(艾迪)