

进剂用量为 1.55 份的硫化胶耐热老化性能更好,同时其老化前后的 $\tan\delta$ 值较小,表明滞后损失小,因此其磨损和温升更低。

3 结论

(1)普通硫化体系胶料经长时间硫化后,多硫键断裂速率大于新交联键生成速率,致使胶料交联程度下降,产生明显的硫化返原现象。半有效硫化体系相对稳定,硫化返原程度较小。

(2)普通硫化体系硫化胶的物理性能、压缩疲劳性能、耐磨性能逊于半有效硫化体系硫化胶,但由于其交联程度较低,耐切割性能较好。

(3)硫化时间对普通硫化体系及半有效硫化体系胶料性能均有一定影响。随着硫化时间的延长,硫化胶的压缩疲劳温升和磨耗量均增大,且普通硫化体系硫化胶压缩疲劳温升及磨耗量的变化

率均大于半有效硫化体系硫化胶。

(4)交联键类型对 NR 胶料性能影响较大。含多硫键较多的普通硫化体系硫化胶耐热老化性能逊于含单硫键和双硫键较多的半有效硫化体系硫化胶。

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Properties of NR Compound with Different Curing Systems

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Abstract: The properties of natural rubber(NR)compounds with conventional vulcanization system (CV) and semi-efficient vulcanization system (SEV) were investigated. The results showed that,compared with NR compound with CV,NR compound with SEV had less cure reversion,better physical properties,compression fatigue property,wear resistance and thermal aging property. In addition,those properties of the NR compound with SEV were improved as the addition level of accelerator increased. However,the cut resistance of NR compound with SEV was inferior to that of NR compound with CV. As the curing time extended,the compression fatigue temperature rise and abrasion loss of NR compounds with both CV and SEV increased,and those of NR compound with CV increased more significantly.

Key words: curing system;NR;curing behavior;compression fatigue property;cut resistance;wear resistance

输送带冷定伸监控系统

中图分类号:TQ336.2 文献标志码:D

由青岛橡六输送带有限公司申请的专利(公开号 CN 102645922B,公开日期 2013-12-04)“输送带冷定伸监控系统”,涉及一种输送带冷定伸监控系统。包括:(1)检测装置,用于实时检测输送带的拉伸长度,并将检测的拉伸长度转换成电压信号;(2)控制装置,用于接收电压信号并转换成数据信号,并将数据信号转换

为输送带的检测拉伸量,将检测拉伸量与预设拉伸量相比,当检测拉伸量达到预设拉伸量时,发出停止拉伸命令;(3)拉伸装置,用于拉伸输送带,当收到停止拉伸命令时停止拉伸输送带,输送带冷却。该系统通过控制装置控制输送带的拉伸量,实现了输送带拉伸量的自动化生产,有效提高了生产效率和产品质量,同时大大降低了工作人员的劳动强度。

(青岛橡六集团有限公司 孙丽华 张 墩)