

小,压缩疲劳温升逐渐减小。

(4)随着偶联剂 Si69 用量的增大,纳米氧化铝/NR 复合材料的拉伸强度和热导率均先增大后减小,压缩疲劳温升逐渐减小。

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Properties of Nano-alumina/NR Composites

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Abstract: The nano-alumina was modified in-situ and the nano-alumina/NR composites were prepared. The influence of addition level of nano-alumina, heat treatment time and addition level of coupling agent Si69 on the physical properties, dynamic mechanical properties and thermal conductivity of the composites were investigated. The results showed that, as the addition level of nano-alumina increased, the tensile strength of composites decreased, and thermal conductivity and temperature rise in compression fatigue test increased. Interface bonding of nano-alumina and NR was improved by the in-situ modification. As the in-situ modification time extended or the addition level of coupling agent Si69 increased, the tensile strength and thermal conductivity of composites increased first and then decreased, and the temperature rise in compression fatigue test decreased.

Key words: nano-alumina; NR; composite; thermal conductivity

晶须硫酸钙改性的硅橡胶复合材料及其制备方法

中图分类号: TQ333.93; TQ330.38⁺3 文献标志码: D

由上海工程技术大学申请的专利(公开号 CN 101787213A, 公开日期 2010-07-28)“晶须硫酸钙改性的硅橡胶复合材料及其制备方法”, 涉及的晶须硫酸钙改性的硅橡胶复合材料配方为: 二羟基聚二甲基硅氧烷 98~100, 正硅酸乙酯 2~5, 催化剂二月桂酸二丁基锡 0.1~0.2, 晶须硫酸钙 5~15, 硅烷偶联剂 0.05~0.45。晶须硫酸钙价格便宜, 且以其作为硅橡胶的补强材料可以大大增加化学反应的接触面和活性, 使材料的拉伸强度、拉断伸长率和热稳定性能等提高。

(本刊编辑部 赵敏)

环境友好型鞋用水性胶粘剂

中图分类号: TQ330.38⁺7 文献标志码: D

由上海诺科化工新材料有限公司申请的专利(公开号 CN 101798482A, 公开日期 2010-08-11)“环境友好型鞋用水性胶粘剂”, 涉及的环境友好型鞋用水性胶粘剂的合成方法为: 用回收聚酯废料醇解合成的聚酯多元醇或聚酯多元酸的水溶液或水分散液, 与助剂配合作为水性胶粘剂直接使用, 或与助剂混合之后, 再和特殊结构交联剂反应制得物理性能和耐水性能更好的水性胶粘剂。该环境友好型鞋用水性胶粘剂具有原料来源广泛、环境污染小、工艺简单、生产成本低等优点, 对各种鞋材具有优异的粘接强度和耐热性能。

(本刊编辑部 马晓)