

捻、复捻过程中捻度不均的现象,且该结构骨架材料具有刚性好、与橡胶粘合强度高优点,因此,用聚酯钢化棕丝生产的 V 带具有受力均匀、不剪切、不松散、不跑长、耐屈挠、干热收缩率小、粘合强度高优点,V 带的使用寿命大幅度延长。

2.4 经济分析

1100dtex/5×3 聚酯线绳的单位质量为 1.85 g·m⁻¹左右,聚酯钢化棕丝的单位质量为约 1.00 g·m⁻¹,而每千克聚酯钢化棕丝的价格与聚酯线绳相当。每生产 1 m B 型 V 带需要 1100dtex/5×3 聚酯线绳 13 g,需要聚酯钢化棕丝 10 g,每生产 1 m B 型 V 带可节约 3 g 聚酯线绳,原材料的

成本下降,企业经济效益提高。

3 结论

(1)采用聚酯钢化棕丝替代聚酯线绳生产 V 带,生产工艺基本不变。

(2)采用聚酯钢化棕丝生产的 V 带具有受力均匀、不剪切、不松散、不跑长、耐屈挠、热收缩小、粘合强度高优点,因此可显著提高 V 带的内在质量和使用寿命。

(3)采用聚酯钢化棕丝生产 V 带能降低原材料的成本,提高企业的经济效益。

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Application of Pre-stretched Polyester Monofilament in V-Belt

LI Xiao-feng^{1,2}, LI Pei-jun¹

(1. Qingdao University of Science and Technology, Qingdao 266042, China; 2. Hangzhou Zhongce Rubber Co., Ltd, Hangzhou 310011, China)

Abstract: The properties of polyester cord and pre-stretched polyester monofilament, and their application in V-belt were investigated. The results showed that, compared with polyester cord, the diameter, breaking strength, elongation at break and elongation at specified load of pre-stretched polyester monofilament were lower, the dry heat shrinkage at high temperature was higher, and the adhesion strength between pre-stretched polyester monofilament and NR was higher. Compared with the finished polyester cord V-belt, the tensile strength and elongation at reference load of the finished V-belt by using pre-stretched polyester monofilament were lower, the pull out strength of cord was higher, the fatigue lifetime of V-belt was longer, and the economic benefit was improved.

Keywords: pre-stretched polyester monofilament; polyester cord; V-belt

辐照交联氯化聚乙烯绝缘橡胶及其制备方法

中图分类号: TQ333.92 文献标志码: D

由广东华声电器实业有限公司申请的专利(公开号 CN 101942150A, 公开日期 2011-01-12)“辐照交联氯化聚乙烯绝缘橡胶及其制备方法”, 涉及的辐照交联氯化聚乙烯绝缘橡胶配方为: 氯化聚乙烯 100, 重质碳酸钙 60~80, 滑石粉 80~110, 增塑剂 DOP 20~40, 敏化剂 5~15, 防老剂 0.5~1.5, 氧化镁 5~10, 石蜡

1~2.5。其中防老剂为抗氧剂 1010、抗氧剂 KY-405 和防老剂 RD 中的一种, 敏化剂为三烯丙基异三聚氰酸酯、三烯丙基氰脲酸酯、三甲基丙烯酸三羟甲基丙烷酯和间亚苯基双马来酰亚胺中的一种。其制备方法为: 将配方组分加入密炼机中混炼均匀, 经过滤机过滤, 再加入开炼机中再次混炼均匀后薄通, 碾压成胶卷, 胶卷经冷喂料挤出机及外出线设备挤出成型, 成型后经电子加速器辐照交联(辐照剂量为 5 Mrad)成橡胶绝缘线缆。

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