足够的变形时间,获得良好的流动性和压延性,以使钢丝帘布表面光洁平整;④调整胶料配方;⑤减小手动挑气泡的捣洞,同时避免冷却小胶团进入辊缝。

## (7)剥皮

产生原因主要因为胶料粘辊所致。

解决措施:降低胶料的门尼粘度。

#### (8) 其它

在钢丝帘线压延过程中,在保证胶料性能和帘线质量的情况下,压延速度及张力对压延钢丝帘布的物理性能(如粘合强度、覆胶量和表面平整度)都具有决定性的作用,因此合理的压延速度和张力对钢丝帘布的质量具有重要意义。

钢丝帘线的张力过小,压延易跳线;张力过大,拉伸过度,影响钢丝帘布使用性能。因此,单根钢丝的张力需要定期检验,保证张力差值在设计范围内(单根钢丝张力控制在9.9~14.7 N范围内)。同时严格控制冷却辊段、储布架及卷取段钢丝帘线张力,以免造成钢丝帘布卷取松紧不一,影响钢丝帘布的表面平整度及性能。

### 4 结语

通过采取上述措施,有效减少了全钢载重子午 线轮胎钢丝帘线压延过程中出现的质量缺陷,将压 延质量缺陷率减小至0.2%以下,不仅提高了轮胎性 能,也增加了经济效益。

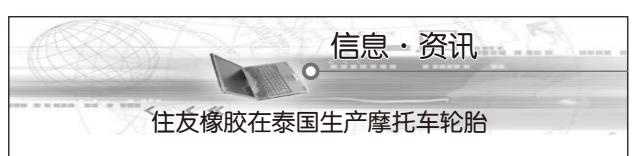
# Improvement on the Calendering Quality of Steel Cords for All Steel TBR Tires

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**Abstract:** The calendering quality defects of steel cords for all steel TBR tires were analyzed, including inhomogeneous density of steel cords, overlapping, curved cords, bending, crossing, blooming, exposed cords and so on. And then effective measures were proposed. For example, the warping rollers and pressure rollers were modified, the temperature and rolling speed were reduced, and the cord tension was adjusted. The calendering quality of steel cords was greatly improved by implementing those changes, and the defect rate by X-ray inspection was reduced below 0.2%.

Keywords: all steel TBR tire; steel cord; calendering; quality defects; X-ray inspection



为了满足亚洲摩托车轮胎日益增长的需求,日本住友橡胶工业公司决定投资14亿日元在泰国建设摩托车轮胎工厂。该工厂预计

于2015年1月投产,可生产全规格摩托车子午线轮胎。目前,住友橡胶工业公司在日本名古屋有1家摩托车子午线轮胎工厂。**郭** 毅