



图 16 优化前后带束层端部在超载情况下的 Mises 应力对比

优化后的方案更合理。

4 结语

基于组合模型技术和子模型技术建立轮胎有限元模型,并分析其危险区域的受力情况,对优化轮胎设计、提高轮胎性能是行之有效的。

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Numerical Simulation on Rubber Structure in Crown of Radial Tire

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Abstract: For 12.00R20 truck radial tire, the global model with complex pattern based on combined model technology and the submodel with fine grid in the crown based on submodel technique were established and verified. The stress and strain characteristics of the rubber structure in the tire crown under static load condition were simulated accurately by using submodel, and the stress of five weak areas in the crown was analyzed. The results showed that, the end of the belt (area M) was most vulnerable to be damaged, and because of the transition of material and structure, its stress concentration and the shear deformation were most serious in the whole crown area. Then the improved method was put forward based on the simulated results.

Key words: radial tire; crown; rubber structure; numerical simulation

轮胎生产企业废水处理用净水剂及 废水处理方法

中图分类号:TQ336.1;X783.3 文献标志码:D

由山东永泰化工有限公司申请的专利(公开号 CN 104478169A, 公开日期 2015-04-01)“轮胎生产企业废水处理用净水剂及废水处理方法”,涉及一种轮胎生产企业废水处理用净水剂及采用该净水剂处理轮胎生产企业废水的方法。该净水剂包含无机净水剂、微生物净水剂和酶制剂,无机净水剂配方(份)为聚合氯化铝 5~20、聚丙烯酰胺 4~16、硫酸亚铁 2~15、硫酸铝 5~

16、微生物净水剂配方(份)为硝化细菌菌粉 0.5~2、脱氮副球菌菌粉 0.4~1.4、硫细菌菌粉 0.2~0.8、苯胺降解菌菌粉 0.3~1.2、酶制剂配方(份)为果胶酶 0.1~1.5、纤维素酶 0.4~1.5、脱氢酶 0.1~0.8、氧化还原酶 0.2~0.8、木聚糖酶 0.1~0.6。该废水处理用净水剂用具有吸附能力的材料为原料,辅以微生物对废水进行处理,使用范围广,并具有净水效果好,净水速度快、安全性高,不产生二次污染的优点,处理后的水透明度极高,可回收利用。

(本刊编辑部 马 晓)