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Influence of Tire Mechanical Characteristics on Handling Stability of Vehicle

WEI Yong, WEI Baolyu, ZHAO Liang, FANG Hua, JIA Yonghui
(SGMW, Liuzhou 545007, China)

Abstract: The effects of influential factors on the tire mechanical characteristics and handling stability of vehicle were analyzed through simulation. An evaluation method of handling stability of vehicle based on the serpentine test and steady-state rotation test was proposed, and the simulation results were verified. The results showed that, the lateral stiffness and friction coefficient had significant impact on the handling stability of vehicle, which could be improved by appropriately increasing the scale factors of lateral stiffness and friction coefficient. The simulation analysis method was easy to operate and had high accuracy, which had guiding significance in the study of tire mechanical characteristics and evaluation of the handling stability of vehicle.

Key words: tire; vehicle; mechanical characteristic; influential factor; simulation analysis; handling stability; lateral stiffness; friction coefficient

GRI推出环保型Ultimate XT实心轮胎

美国《现代轮胎经销商》(www.moderntiredealer.com)2019年11月22日报道如下。

特种轮胎制造商全球橡胶工业有限公司(GRI)开发了一款环保型高性能Ultimate XT实心轮胎(见图1)。

据GRI官方人员介绍,该公司的研发团队与科伦坡大学化学系的科学家团队合作,已用碳中和且可再生的天然油代替了轮胎的石油基油。



图1 Ultimate XT实心轮胎

该研发轮胎适用于所有地形地面和恶劣的工作环境,测试表明,采用特殊的环保型天然油代替石油基油后,轮胎性能卓越。

GRI销售总裁Gary Stevens说:“经统计证明,环保型Ultimate XT实心轮胎具有宽阔的轮廓印痕,可使其在整个寿命周期内按比例减少磨损,同时能够在任何环境(包括室内、室外、潮湿和干燥环境)下的地面使用。所有规格的该款无标记和夹式轮胎均已上市。”

随着高性能Ultimate XT实心轮胎的推出,GRI计划加强其生产高性能、绿色实心橡胶轮胎的战略,从而减少环境污染,提高效率。GRI总部位于斯里兰卡,在9个国家设有办事处,在50多个国家设有销售业务处。

(许亚双摘译 赵 敏校)