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Effect of ZDMA Content on Properties of ZSC/HNBR Blends

YANG Zhengyi, ZHONG Sijia, ZHANG Maoqi, MA Shaoxia
(Shandong University of Science and Technology, Qingdao　266590, China)

Abstract: ZSC is a new type of high strength polymer prepared by grafting modified hydrogenated nitrile rubber (HNBR) with zinc methacrylate (ZDMA). In order to improve the physical properties of HNBR compound at high temperature, ZSC/HNBR blends were prepared by mechanical blending. The effects of ZDMA content on the properties of ZSC/HNBR blends were investigated by adjusting the ZSC/HNBR ratio. The results showed that, ZSC/HNBR blends had better curing characteristics, physical properties at room temperature and high temperature than pure HNBR vulcanizates, and the content of ZDMA had a significant effect on the physical properties of ZSC/HNBR blends. When the blend ratio of ZSC/HNBR was 50/50 (the mass fraction of ZDMA was 0. 245 9), the comprehensive physical property of the vulcanizate at room temperature was the best. When ZSC/HNBR blend ratio was 85/15 (the mass fraction of ZDMA was 0. 423 7), the comprehensive physical property of the vulcanizate at high temperature was the best.

Key words: HNBR; ZSC; ZDMA; physical property

农业子午线轮胎成型机研发成功

桂林橡胶机械有限公司日前完成了一款新型农业子午线轮胎成型机的研发工作。

此次研发的成型机适用轮胎规格为609. 6～1 066. 8 mm(24～42英寸)，主轴中心高为1 500 mm，胎坯质量最大可达200 kg，涵盖大部分农业子午线轮胎的规格。该成型机采用先进的三鼓一次法成型技术，具有轮胎成型精度高、轮胎质量稳定性好的特点，设备占地面积比市场同类设备降低约17%。

我国农业子午线轮胎处于逐步取代农业斜交轮胎的调整期，未来农业子午线轮胎成型机具有十分广阔的市场前景。桂林橡机一直追踪国内外橡胶机械市场和技术的发展趋势，技术研发投入以年均6%的增长率增长，开发了市场所需的高精度、高效率、智能化、节能环保型的硫化机、成型机等橡胶机械设备。

近年来，桂林橡机开发出5 334 mm(210英寸)液压硫化机、1 727. 2 mm(68英寸)液压式硫化机、1 320. 8 mm(52英寸)新型半钢液压硫化机、2 794 mm(110英寸)机械式硫化机、1 828. 8 mm(72英寸)机械式硫化机、1 333. 5 mm(52. 5英寸)机械式硫化机、1 854. 2 mm(73英寸)翻胎硫化机、全新鼓式帘布筒工程机械轮胎成型机等新品。

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