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Research Progress in Application of Carbon Nanotubes in Synthetic Rubber

CUI Xiaoming

(Yanshan Branch of Beijing Research Institute of Chemical Industry of SINOPEC, National Engineering Research Center for Synthesis of Novel Rubber and Plastic Materials, Beijing 102500, China)

Abstract: The unique structure of carbon nanotubes gives it ultra-high strength, great toughness, special electrical and thermal conductivity and other characteristic properties. As a reinforcing material, it has many important applications in the rubber industry. In this paper, the research progress in the application of carbon nanotubes used alone to reinforce SBR, EPR, NBR, IR and various rubber blends, and the application together with other reinforcing materials are discussed. It is pointed out that in the future the work focus is to continue to explore the modification methods of carbon nanotubes, improve the dispersion of carbon nanotubes in rubber matrix, enhance the interaction between carbon nanotubes and the rubber matrix, explore the synergistic mechanism of carbon nanotubes and other additives, and improve the preparation technology of carbon nanotubes/synthetic rubber composites.

Key words: carbon nanotube; filler; reinforcement; synthetic rubber; composite; application; research progress

山东大业与青岛科捷合作推进钢帘线智能化改造项目

日前,山东大业股份有限公司(以下简称大业股份)与青岛科捷机器人有限公司签署商务合作协议,共同推进子午线轮胎钢帘线智能化改造项目三期工程。双方围绕设备采购、技术实现、产权保护等方面达成战略合作。

子午线轮胎钢帘线智能化改造项目于2019年9月启动,总投资约10.9亿元。其中智能化改造总投资约3.68亿元,分三期建设,目前已完成一、二

期项目建设。三期项目拟投资8 800万元,对钢帘线二厂已经建成和拟建的4条生产线,以及钢帘线一厂半钢生产线进行智能化改造,预计2021年年底建成并投入运行。

三期项目完成后,大业股份将成为行业中率先实现智能物流、智能检配、智能包装的全流程智能制造的示范企业,质量管控能力和生产效率将得到实质性提升,用工减少,稳定的产品质量保障将为高品质轮胎的生产打下坚实基础。

(本刊编辑部)

欢迎加入全国橡胶工业信息中心会员组织