

[6] Wang M J. The Role of Filler Networking in Dynamic Properties of Filled Rubber[J]. Rubber Chemistry and Technology,

1998,71(3):520-589.

收稿日期:2014-12-02

Study on Using Liquid Isoprene Rubber as Reactive Plasticizer of Butadiene Rubber

ZHENG Zi-jian, ZHAO Su-he, WU You-ping, REN Yue-qing

(Beijing University of Chemical Technology, Beijing 100029, China)

Abstract: The influence of self-made liquid isoprene rubber (LIR) on the structure and properties of BR compound was investigated, and compared with paraffin oil and imported LIR-50. The results showed that, LIR could improve the processability of BR, but the plasticating effect of LIR was slightly lower than that of paraffin oil. Compared with paraffin oil, LIR was mostly co-crosslinked with BR during vulcanization, so it worked as reactive plasticizer. The vulcanizate plasticized by LIR possessed lower extraction rate and more stable physical properties. The plasticating effect of two kinds of LIR was almost same.

Key words: reactive plasticizer; liquid isoprene rubber; BR; processability; physical property

北橡院自主研发的 59/80R63 全钢巨型 工程机械子午线轮胎成功下线

中图分类号: U463.341⁺.5/.6 文献标志码: D

2015 年 4 月 13 日, 由北京橡胶工业研究设计院(简称北橡院)自主研发的 59/80R63 全钢巨型工程机械子午线轮胎(见图 1)在福建海安橡胶有限公司(简称海安)试制成功。该轮胎规格为目前世界最大规格, 轮胎直径为 4.03 m, 质量达 5.8 t, 之前仅有米其林和普利司通两家公司能够生产。该轮胎的试制成功, 表明我国也具备了生产该规格轮胎的能力, 打破了米其林和普利司通的垄断局面。

“十年耕耘, 十个规格, 十全十美”。从 2007 年起, 北橡院与海安合作开发全钢巨型工程机械子午线轮胎。北橡院自主创新, 从零开始, 从无到有, 经过近 10 年的艰苦努力, 成功开发了全系列全钢巨型工程机械子午线轮胎产品, 共包括 49~



图 1 59/80R63 全钢巨型工程机械子午线轮胎

63 英寸(1 244.6 ~ 1 600.2 mm) 10 个规格: 27.00R49, 30.00R51, 33.00R51, 36.00R51, 37.00R57, 40.00R57, 46/90R57, 50/80R57, 53/80R63 和 59/80R63(见图 2), 形成了我国成熟的全套全钢巨型工程机械子午线轮胎生产技术。



图 2 全系列全钢巨型工程机械子午线轮胎产品

除了近两年新开发的两个 63 英寸轮胎规格即将上市投入使用, 所开发的其他规格全钢巨型工程机械子午线轮胎产品已在国内外市场上应

用, 且产品质量达到国内领先、国际先进水平, 受到用户的广泛称赞。

(北京橡胶工业研究设计院 张 伟 蔡 庆)