Effect of Inorganic Fillers on Damping Properties of Molybdenum-based High Vinyl Polybutadiene Rubber

HUA Jing, YANG Haida, LIU Kai, LIU Jinhui, WANG Xin

[Key Laboratory of Rubber-Plastics Ministry of Education, Qingdao University of Science and Technology, Qingdao 266042, China]

Abstract: The damping property and physical properties of molybdenum-based high-vinyl polybutadiene rubber (HVBR) compound and several commonly used rubber compounds were studied. The effects of the amount and type of inorganic fillers on the damping properties of HVBR compounds were also investigated. The results showed that the loss factor (tanδ) of HVBR compound was higher than that of natural rubber (NR), styrene butadiene rubber (SBR) and butyl rubber (IIR) compounds, and the damping performance was better in the range of normal temperature, but the effective damping temperature range was a little narrow. The tensile strength of HVBR compound was lower but it met the application requirements. The heat aging performance of HVBR compound was good. It was found that the addition of vermiculite powder and hollow glass beads could significantly improve the damping performance of HVBR compound, and addition of modified carbon nanotubes and mica powder presented little improvement. When the addition level of vermiculite powder and hollow glass beads was 3 and 15 phrs, respectively, the tanδ peak of HVBR compound was quite large, the damping performance was good, and the effective damping temperature range was wide.

Key words: molybdenum-based high-vinyl polybutadiene rubber; damping property; inorganic filler; vermiculite powder; hollow glass bead

中国轮胎“双反”案完胜

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华盛顿时间2017年2月22日，美国国际贸易委员会（ITC）5位委员就对华卡客车轮胎反倾销反补贴案终裁阶段行业损害进行投票，以3∶2的结果认定中国对美出口卡客车轮胎没有对美国产业造成实质性损害及损害威胁。

该裁决结果意味着美国将不对中国卡客车轮胎产品征税，已经征收的保证金将全额退还。我方完胜！

此次“双反”案件在无损害抗辩中获得完胜，是轮胎行业在商务部等国家部委的全力指导、协调和支持下，在行业商协会的组织下，在国内外律师的共同努力下完成的。这次胜利，对轮胎行业今后应对国际贸易摩擦意义重大。

专家指出，本次“双反”案件虽然获胜，但我们并不能高枕无忧，国际贸易保护主义并未停止，推进我国轮胎行业转型升级、以智能制造和“走出去”加速产品结构调整、推进产品差异化创新和全球化布局、加强自律和提高产业竞争力是行业的当务之急。同时，我国轮胎行业还要加强与美国等在内的世界贸易合作伙伴的合作，开放包容，建立和维护有利于国际贸易发展的市场秩序和营商环境，促进共同发展。

（本刊编辑部）

米其林在墨西哥的工厂破土动工

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米其林第69家工厂破土动工。该工厂位于墨西哥中部瓜纳华托州莱昂，投资4.5亿欧元，占地面积约14.2万m^2，预计于2018年底竣工。一期工程完工后，该厂的轮胎年产能预期为400万条，之后将逐渐提升到500万条。

这家新工厂将主要生产高性能和超高性能乘用车轮胎、轻型载重车轮胎、运动型多功能车轮胎和跨界旅行车轮胎，产品主要供应北美市场。

（谢　立）