

4 结语

通过优化结构、严控挤出和成型工艺,胎圈结构更合理,避免了应力集中,提高了胎圈强度,有

效解决了半钢子午线轮胎胎圈早期裂口的问题,提升了产品的市场竞争力。

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Cause Analysis of Early Stage Bead Circumferential Cracks of Semi-steel Radial Tire and Corrective Actions

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Abstract: The root causes of early stage bead circumferential cracks of semi-steel radial tire were analyzed and corrective actions were proposed. The main causes included small tension rate of carcass ply, stress concentration on bead, small thickness of abrasion rubber and the splice beyond the mark line of rim, large width of belt, nonconforming turn-up in building, et al. With structure optimization and strict control of extruding and building process, the bead structure was better, stress concentration was avoided, high-speed performance, durability and bead strength of the tire were improved, and the claim rate was decreased.

Key words: circumferential cracks; bead; semi-steel radial tire; structure design; extrusion; forming

2017年我国炭黑进出口概况

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据中国海关统计,2017年我国炭黑总进口量为10.21万t,同比增长12.69%;进口金额为24 628.71万美元,同比增长12.51%;进口单价为2 411.24美元·t⁻¹,同比降低0.20%。其中,来自美国的炭黑进口量为2.18万t,占炭黑总进口量的21.35%,同比增长6.86%;来自日本的炭黑进口量为1.69万t,占炭黑总进口量的16.55%,同比增长24.26%;来自韩国的炭黑进口量为1.30万t,占炭黑总进口量的12.73%,同比降低24.42%;来自中国台湾的炭黑进口量为1.00万t,占炭黑总进口量的9.79%,同比增长26.58%;来自泰国的炭黑进口量为1.16万t,占炭黑总进口量的11.36%,同比增长114.81%。其中,上海海关的炭黑进口量为4.53万t,占炭黑总进口量的44.37%,同比增长13.53%;黄埔海关的炭黑进口量为1.13万t,占炭黑总进口量的11.07%,同比增长8.65%;天津海关的炭黑进口量为0.90万t,占炭黑总进口量的8.81%,同比增长4.65%;青岛海关的炭黑进口量为0.80万t,占炭黑总进口量的7.83%,同比增长70.21%;大连海关的炭黑进口量为0.86万t,占炭黑总进口量的8.42%,同比增长56.36%。

2017年我国炭黑总出口量为73.13万t,同比降低0.39%;出口金额为68 798.08万美元,同比增长36.49%;出口单价为940.80美元·t⁻¹,同比增长0.37%。其中,对泰国的炭黑出口量为19.57万t,占炭黑总出口量的26.76%,同比增长3.82%;对印度尼西亚的炭黑出口量为14.55万t,占炭黑总出口量的19.90%,同比增长8.02%;对越南的炭黑出口量为8.36万t,占炭黑总出口量的11.43%,同比增长31.45%;对日本的炭黑出口量为7.08万t,占炭黑总出口量的9.68%,同比增长7.11%;对中国台湾的炭黑出口量为5.47万t,占炭黑总出口量的7.48%,同比增长1.11%;对印度的炭黑出口量为4.78万t,占炭黑总出口量的6.54%,同比降低约16.72%。其中,天津海关的炭黑出口量为33.75万t,占炭黑总出口量的46.15%,同比增长18.55%;上海海关的炭黑出口量为10.53万t,占炭黑总出口量的14.40%,同比增长11.43%;青岛海关的炭黑出口量为10.13万t,占炭黑总出口量的13.85%,同比降低25.29%;济南海关的炭黑出口量为5.70万t,占炭黑总出口量的7.79%,同比降低10.80%;南京海关的炭黑出口量为3.31万t,占炭黑总出口量的4.53%,同比增长34.55%。

(崔小明)