

表 1 成品轮胎物理性能试验结果

项 目	实测值	GB/T 2979—2008
胎面胶性能		
邵尔 A 型硬度/度	65	55~70
拉伸强度/MPa	12.7	≥10.0
拉断伸长率/%	510	≥450
阿克隆磨耗量/cm ³	0.35	≤0.6
粘合强度/(kN·m ⁻¹)		
胎面-带束层	12.9	≥6.8
带束层-胎体帘布层	10.2	≥4.8
胎体帘布层间	8.5	≥4.8
胎侧-胎体帘布层	12.1	≥4.8

4.3 强度性能

采用直径为 38 mm 的压头进行强度性能试验,压头压入轮胎的速度为 50 mm·min⁻¹,试验结束时在第 5 点压穿,轮胎破坏能为 2 795.5 J。

5 结语

480/80R42 无内胎半钢农业子午线轮胎研制成功,其充气外缘尺寸和物理性能均符合相应设计和国家标准要求。该产品是我公司第 1 个 42 英寸规格农业子午线轮胎,而且一次试制成功,以此为基础,我公司先后研制成功 520/85R42,290/90R42,320/90R42,580/70R42,650/65R42 等规格新产品,加快了产品结构调整步伐,完善了产品系列。目前,480/80R42 无内胎半钢农业子午线轮胎生产工艺稳定,质量良好,合格率为99.88%,产品已经大量出口,得到了客户的认可,取得了良好的经济效益。

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Design of 480/80R42 Tubeless Steel Belted Agricultural Radial Tire

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Abstract: The design of 480/80R42 tubeless steel belted agricultural radial tire was described. In the structure design,the following parameters were taken:overall diameter 1 829.5 mm,cross-sectional width 467 mm,width of running surface 421.2 mm,arc height of running surface 20.5 mm,bead diameter at rim seat 1 066.5 mm,bead width at rim seat 397 mm,maximum width position of cross-section (H_1/H_2) 0.949 4,pattern depth 52 mm,block/total ratio 24.7%,and total number of pitches 20. In the construction design, the following processes were taken:cold feed extrusion and winding process for tire tread. 2 layers of 2100dtex/2V₁ nylon 66 dipped cord for carcass ply,3+9+15×0.22+0.15HT steel cord for belt,and Φ1 mm 19[#] copperized bead wire for bead. The tire was built using two-stage process and cured in bladder press. It was confirmed by the test of the finished tires that,the inflated peripheral dimension and physical properties met the requirements in design and national standard.

Key words: tubeless steel belted agricultural radial tire;structure design;construction design

一种轮胎成型工艺

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由中国化工橡胶桂林有限公司申请的专利(公开号 CN 103847116A,公开日期 2014-06-11)“一种轮胎成型工艺”,涉及的轮胎成型工艺包括制作胎面和胎体。首先将胎面置于 5.88~7.35 MPa 的压力下预硫化 30~60 min,得预硫化胎面;然后对预硫化胎面进行打磨、刷胶浆后与胎体贴合置

于硫化机中进行定型硫化,得成品轮胎。该工艺胎面采用预硫化方式生产,胎面密实度高,具有更好的耐磨、抗刺扎、抗切割性能,可大幅提高轮胎的使用寿命;由于胎面和胎体分开制作,胎坯成型厚度大大减小,胎体藏气可能性降低,产品质量更加稳定;此外,胎面和胎体分开制作,出现质量问题报废的只是其中一样,可以减少废次品。

(本刊编辑部 马 晓)