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Mold Design for Rubber Injection Molding

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Abstract: In this paper, the mold for rubber injection molding was designed based on the product structure and property requirements, and processing design of the injection molding machine as well. The number of cavities was designed based on the requirement of rubber product quality, projected area, dimensional accuracy, production yield, injection volume, clamping force, mold dimensions and effective mounting area. The cavities were arranged in equal distance. The number of mold joints should be as less as possible and it was better to place the joints away from the working surface of the final product. The center line of main feed coincided with the center line of injection nozzle. Circular shaped feed cross-section was preferred. In addition, it was recommended to minimize the feed length and put the feed gate to the position where the product had the largest thickness.

Keywords: injection mold; injection molding; clamping force; cavity; mold joint; feed system



信息·资讯

萨驰华辰智能化半钢子午线轮胎一次法成型机通过鉴定

2015年8月19日, 萨驰华辰机械(苏州)有限公司自主研发的SRS-H智能化半钢子午线轮胎一次法成型机(无人机)通过中国石油和化学工业联合会组织的鉴定。

SRS-H智能化半钢子午线轮胎一次法成型机实现了半钢子午线轮胎全自动、智能化成型, 该机技术已获发明专利1件、实用新型专利7件, 具有自主知识产权。实际生产应用表明, 该机运行安全、稳定、可靠, 生产效率高, 实测单胎生产循环时间38 s, 达到国际先进水平要求, 得到用户好评。

设备主要创新点有: ①首次研发专用机械手+摆转、平移机构+人工智能模糊识别技术, 实现了胎圈的自动装载, 突破了传统人工上胎圈的方式; ②研发专用视觉系统, 实现了对带束层、胎面接头质量监控和智能判断, 改变了传统的人工检查模式; ③研发集成滚压站技术, 实现了抓取胎面组件及组合滚压, 能够自动适应轮胎规格更换, 实现了柔性化, 提高了生产效率; ④研发主动带束鼓贴合技术, 带束鼓上下、左右移动, 提高了稳定性和贴合效率; ⑤具有帘布接头智能处理功能, 改变了传统人工处理模式, 提高了生产效率和轮胎均匀性。

SRS-H智能化半钢子午线轮胎一次法成型机在一定程度上可以取代同类进口高端产品, 进一步扩大了国产高端轮胎制造机械的范围。

陈桂林