

增加了以下功能:

(1) 上位机可监控整个生产线网络运行情况, 进行网络诊断;

(2) 上位机采用WINCC6.0监控软件, 不改变原操作习惯, 并显示挤出胎面生产线运行画面, 画面显示各设备运行状况和各浮动辊的位置;

(3) 上位机可进行生产线故障诊断、记录、查询和工艺运行参数记录。

工程机械轮胎胎面挤出生产线PLC控制系统改

造后, 生产线控制效果良好, 工艺质量较大提高, 设备能力指数(CMK)和过程能力指数(CPK)分别由改造前的0.83和0.91增大到1.34和1.41。

6 结语

我公司工程机械轮胎胎面挤出生产线PLC控制系统由S5系列改造为S7系列后, 生产线运行稳定, 工艺质量和产量提高, 故障率和维修成本降低, 达到改造目的。

Upgrade of PLC Control System for OTR Tire Tread Extrusion Line

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Abstract: In this study, the PLC control system for OTR tire tread extrusion line was upgraded from S5 series to S7 series. In the upgraded system, Siemens S7-400 PLC was selected for the host control system with CPU 414-2DP. Advantech IPC was used as the man-machine interface and the whole operation platform was re-designed. Mettler-Toledo display was selected for balances. The temperature of discharged compound was measured using infrared temperature sensors. DC drive and DC motor were used in the cutting system. The length of extruded tread was controlled by encoder module. After the upgrading, the control system provided full functions such as fault diagnosis, recording and query, and process parameter recording. The product quality and production yield were improved, and the failure rate and maintenance cost were reduced.

Keywords: OTR tire; extrusion line; control system; PLC; upgrade

信息·资讯

ANRPC预测2015年天然橡胶产量增长3.2%

据天然橡胶生产国协会(ANRPC)预测, 2014年世界天然橡胶产量为1063万t, 2015年将增至1118万t, 同比增长3.2%。ANRPC成员国的天然橡胶需求量将从2014年的740万t增至2015年的780万t。ANRPC强调要提高单位开割面积天然橡胶产量(简称单产), 越南和泰国

天然橡胶单产为 $1800 \text{ kg} \cdot \text{hm}^{-2}$, 而印度橡胶种植园过于分散, 平均规模仅约 0.53 hm^2 , 单产已回落到 $1730 \text{ kg} \cdot \text{hm}^{-2}$ 。目前, 橡胶种植业已延伸到全球更多的地区, 如西非的科特迪瓦、尼日利亚、喀麦隆和利比里亚等。

卢狄