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光学计量与测试

快速匹配算法在药筒模块检测中的应用

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摘要：

为了能够快速、准确判断药筒模块是否合格，实现检测的自动化，针对药筒模块中可燃性紧塞盖图像的特点和检测要求，在研究经典相关系数匹配算法基础上，采用了一种快速图像匹配算法，即通过减少相关系数计算量和模板搜索范围，在保证匹配准确度的前提下来提高图像匹配速度。实验和现场测试表明，使用该方法，匹配速度提高了近67%，实现了图像的快速匹配，软件误判率＜1%,满足实际生产要求。

关键词： 图像匹配 药筒模块 相关系数 搜索范围

Fast matching algorithm in cartridge module detection

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Abstract:

In order to quickly, automatically and accurately judge whether the cartridge module is qualified, according to the combustible tight plug cover image of cartridge module and the detection requirements, a fast image matching algorithm based on classical correlation coefficient matching algorithm is used to reduce the correlation coefficient calculation and template matching search scope, and the speed of the image matching is increased without sacrificing the matching accuracy. Field test shows that this method can rapidly and accurately complete target detection, false rate＜1%, matching speed increased by 67%, which meet the production requirements.

Keywords: image matching cartridge module correlation coefficient search scope

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