

Plc-based interface design and implementation for control of test and separation station education

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Abstract

In this study, an interface was designed for the separation of components according to the required conditions and parts to be tested. This testing and separation automation is found the place of use in many parts of the industry. Interface design is installed, a human machine interface (HMI), and data control is provided with programmable logic controller (PLC). The system includes the testing procedures which Parts manually loaded with the help of sensors, counting, size measurements, made the finding of the black-white color, and material properties. After the test process, the parts on the conveyor according to the desired characteristics are divided according to three different separation process. In addition, monitoring of the system or the storage of the data are also provided. With the help of the interface, the program running in the background gives information about the system components and training of system is aimed.

Key words: PLC Control, Test and Separation, HMI screen

INTRODUCTION

Today PLC and HMI hardware have found a wide usage area thanks to the technological developments in the industry. PLCs have functions such as easy programming, precision control, error-free work. HMIs has provided controlling of the PLC easier and monitor data in a visual way. The Testing and Separation station, which is a Mechatronics System, is composed of pneumatic cylinders, electric motors, programmable controllers, and programmable equipment, such as touch