STAMPER CONTROLLED BY PLC

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ABSTRACT

Stamper controlled by PLC is contributes to effective the work of stamping. Stamper is a surname to represent an object and label as information. Besides, conveyor is a common piece of mechanical handling equipment that moves materials from one location to another location. PLC (Programmable Logic Controller) performs the functional of conventional relays, timers, and counters. The core function of PLC is programing in order to functions the conveyor and stamper.

The purpose of using PLC to control the stamper and conveyor are more flexibility, less space, more compact, higher reliability (less mechanical parts), and can be easily connected to computer systems and to hardware. The aim of using PLC to control and stamper is when an empty box place on the conveyor position 1, press the green push button it will automatic move to position2. Once it reaching position2, limit switch detect the present of an empty box the conveyor motor automatic stop and the stamper stamped on the empty box. After 20 second, conveyor motor will automatically move to position3. It will stop at position 3 which is detected by a limit switch. Where the empty box was removed, assume that only one object is on the conveyor at a time.

In the following I have conducted an internet research to get more sources and information about this project. In additional, I also seek assistance from supervisor to improve the progress in order the project to perform well and efficiency. The preliminary result is changing form the motor to pneumatic cylinder for use of stamper, a solenoid valve is needed to control the push and pull of pneumatic cylinder. On the contrary, the current and voltage initially use is 1.5 Ampere and 12VDC respectively for the motor. It cannot function as expected and the last I have tuned the current and voltage to 2.5 Ampere and 20 VDC respectively. Moreover, I have try server time to make sure that the ladder diagram of the PLC is function correctly

Last but not least, I have learnt how the PLC and the ladder diagram for the PLC work correctly. Furthermore I have learnt how the solenoid valve control the push and pull of the pneumatic cylinder and I have knew that is needed higher current and voltage to move the conveyor belt. Following an in-depth multi-dimensional analysis of preliminary research results, some recommendations for stamper controlled by PLC will also be presented.