

ABSTRAK

(Budi Pujo Cahyono, 2020), Application of Automatic Sliding Gate in Food Grade Berbasis Programmable Logic Control (PLC), Electrical Engineering, Faculty of Engineering of UNIPA Surabaya,

Dosen Pembimbing Atmiasri, ST.,MT.

Industri yang bergerak disektor makanan dituntut bisa menjaga kualitas makanannya dari dampak kontaminasi, baik itu kontaminasi kotoran yang terbawa oleh manusia, debu serta dari bakteri di sekitarnya, banyak perusahaan disektor tersebut dalam melakukan aktivitas keluar masuknya produk masih menggunakan sistem manual sehingga berdampak kurangnya higienitas dari produk tersebut.

Rancangan Aplikasi *Automatic Sliding Gate* Pada Ruangan *Food Grade* Berbasis *Programmable Logic Control (PLC)* dirancang untuk mencegah atau mengurangi adanya kontaminasi kotoran, debu atau kontaminasi udara luar yang berpotensi masuk ke dalam ruang *Food Grade*. Studi ini juga ditujukan untuk memudahkan para teknisi dalam merancang sebuah alat berbasis *PLC* serta bisa mempelajari sistem kerja alat secara tepat dan benar sesuai dengan urutan sistem kerja rancangan sehingga diharapkan para teknisi bisa mempunyai *skill* yang baik serta bisa mengikuti perkembangan teknologi di bidang *automation system*. Setelah melalui beberapa penelitian dan serangkaian uji coba rancangan alat ini bisa beroperasi sesuai dengan fungsinya dan tentunya apabila terjadi gangguan pihak teknisi akan dengan mudah melakukan *treacibility* tanpa melibatkan pihak *external*. Melalui pembuatan alat ini bisa dilihat bahwa bila seseorang mau mempelajari sebuah sistem kerja alat secara seksama dan dengan semangat yang tinggi maka orang tersebut akan bisa memahami prinsip kerja dari peralatan yang dipelajarinya yang selanjutnya bisa dikembangkan sesuai dengan kebutuhan *operational* perusahaan

Kata kunci : *PLC, Automation, Sliding gate, Motivasi*

ABSTRACT

(Budi Pujo Cahyono, 2020), Application of Automatic Sliding Gate in Food Grade Room Based on Programmable Logic Control (Plc), Electrical Engineering, Faculty of Engineering UNIPA Surabaya

Guide by Atmiasri, ST.,MT.

Industries engaged in the food sector are required to be able to maintain the quality of their food from the impact of contamination, whether it is contamination by dirt carried by humans, dust and from the bacteria in the vicinity, many companies in the sector in carrying out their activities the entry and exit of the product still uses a manual system so that it has an impact on the lack of hygiene of the product.

Application Design of Automatic Sliding Gate in Food Grade Room Base of Programmable Logic Control (PLC) is designed to prevent or reduce the presence of dirt, dust or outside air contamination that has the potential to enter the Food Grade room. This study is also intended to make it easier for technicians to design a PLC-based tool and be able to learn the working system of the tool correctly and correctly in accordance with the order of the design work system so that it is hoped that the technicians can have good skills and can follow technological developments in the field system automation.

After going through several studies and a series of trials, the design of this tool can operate according to its function and of course if there is a disturbance the technician will easily perform treacibility without involving external parties. Through the manufacture of this tool, it can be seen that if someone wants to study a tool work system carefully and with high enthusiasm, that person will be able to understand the working principle of the equipment he studied which can then be developed according to the company's operational needs.

Keywords: PLC, Automation, Sliding gate, Motivation