

CONTACT LENS TRAY POSITIONING CONTROL BY USING DOUBLE-SLIDER MECHANISM AND PROGRAMMABLE LOGIC CONTROLLER

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

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Automation plays a vital role in many engineering applications nowadays, especially in industry. The implementation of automation system includes mechanical system, electrical system and programming within it. In this thesis project, a double-slider mechanism to provide motion in X- and Y- direction is introduced to solve the sorting problem in PT XYZ. Currently, no specific automated machine is dedicated for this process. This mechanism will be driven a servomechanism control system which utilizes servomotors as the actuator. The double-slider mechanism is implemented by installing two linear guide bearings on a track. A table will be installed on top of each linear guide bearing. There will linkage arms which are installed on the table to connect each linear guide bearing to a tray holder. The purpose of the linear guide bearings movement is to position the tray holder to a certain position. If both of the linear guide bearings are traveling in the same direction, then it will provide movement in X-direction. Y-direction movement is possible by moving the linear guide bearings in opposite direction. The movement of the servomotor is controlled by a Programmable Logic Controller.

Keywords: Double-slider mechanism, Programmable Logic Controller, Servomechanism, Positioning.



DEDICATION

I dedicate this work for my family and the country I love : Indonesia



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