

DESIGN AND CONSTRUCTION OF NUT FEEDER SORTING SYSTEM

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11401047

BACHELOR'S DEGREE

in

MECHANICAL ENGINEERING – MECHATRONICS CONCENTRATION

FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY



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June 2019

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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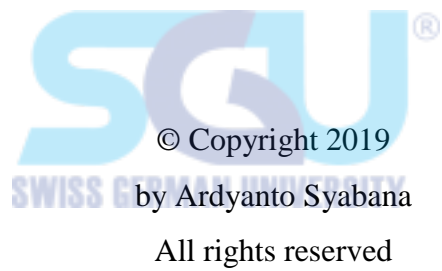
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The purpose of this thesis is to design a sorting machinery for nut fastener with a concept of weight checking machine. The machine detects the weight of the nut on a conveyor by using load cell sensor. The nuts will be placed into a vibratory bowl feeder to line up the nuts. After the nuts are queued, they will be transferred into the weight checking conveyor to determine which container will the nuts be placed. To prevent the load cell from over reading, the gate on the bowl feeder will be placed near the exit and the nuts will be fed one by one. Kicker will be installed to kick the nuts into the container depending on the weight of the nuts. Nuts outside of known weight will be thrown into a rejected container. The opening and closing of the kicker and the gate will be controlled by using infrared sensor.

Keywords: Weight Checking Machine, Vibratory Bowl Feeder, Loadcell, Fasteners, Nuts



DEDICATION

I dedicate this works to the almighty God, my beloved family, and Indonesia.



ACKNOWLEDGEMENTS

This thesis project is done not by myself, but with the help of others such as friends and my advisor. The design of the project are mainly inspired from several concepts and other literature such as thesis and articles.

I would like to thank the Almighty God for the guidance and blessing, my family who mostly supports me.

I would also thank to my advisor, Mr. Erikson Sinaga, for his advices and concerns. I would as well thank for ideas that are present which gives me inspirations.

I would also extend my thanks to Mr. Cepi M. Hanafi, S.S.T, M.T, Mr. Y. Fredhi S, Dr. Eka Budiarto, S.T., M.Sc, Mr. Benny Widjaja, M.T, and Dr. Rusman Rusyadi for their advises towards this thesis project..

Finally, I would like to give my gratitude to Swiss German University which has facilitated me in completing this thesis project.

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