

**FLANGING MACHINE FOR FOOD AND BEVERAGES STAINLESS STEEL
PLATE BENDING / TANK**

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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This dissertation is sponsored by *PT. Baja Bengkok*, following by the demand of this company which works at making some storage tanks for food and beverages, *flanging machine* invention is needed to make the company work easier and reduces less labor power. This research and invention will also be the requirements form Swiss German University for students who take the bachelor's degree in Mechatronics.

Especially in local area Indonesia, back then all of the curves for the tank end or heads is made using manual flanging machine, which needed labor power contribution. *Flanging machine* with automated control is really rare, most of them are using labor power to give pressure for bending the stainless-steel plate into curve shape. By doing some research about the material which is *stainless-steel* material strength, stress and shear, and also doing some research at previous mechanism of *flanging machine*, a new design with such combination of automation and mechanical components has been created. A semi-automated control *flanging machine* will be constructed from the design to accomplish easy and practical control for bending the stainless-steel plate using hydraulics components to reduce the labor power needed.

Keywords: PT. Baja Bengkok, flanging machine, stainless-steel



DEDICATION

I dedicate this works for the future of the company I loved *PT. Baja Bengkok*. Who have subsidized me throughout the process of this works. I want to dedicate this dissertation also to my father, mother, and brother. Special thanks for Claudia Clamicca, who have always been a constant source of support and encouragement during the challenges of my whole university life. To all my beloved classmates during Mechatronics Engineering major, Dhimas Mahendra and Renaldo Widiyanto for always giving me an advice and for helping me in creating the structure, Calvin Joseph for always giving a guidance for the programming and to Mikael Adrianto for giving me some new references and information that needed for my thesis. and the last but not least Mr. Leonard Rusli and Mr. Benny Widjaja whose good examples have taught me to work hard for the things that I aspire to achieve. Above all I would like to thank God the most for giving me life and blessings without Him any of these would not be happenig



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