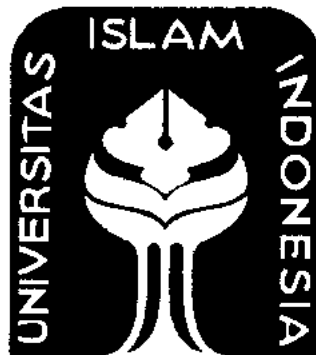


**SUBSTITUTION OF EXPENSIVE WELDING ELECTRODE FROM
JAPAN WITH DOMESTIC ELECTRODE TO BE APPLIED IN
CONTINUOUS GALVANIZING LINE MACHINE**

Thesis

Submitted to International Program

Faculty of Industrial Technology in Partial Fulfillment of
the Requirements for the degree of Sarjana Teknik Industri at
Universitas Islam Indonesia



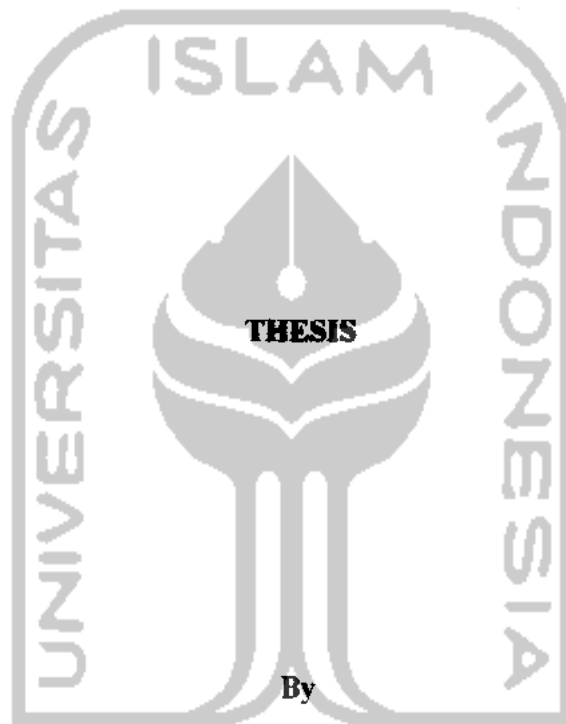
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YOGYAKARTA**

2010

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WITH DOMESTIC ELECTRODE TO BE APPLIED IN CONTINUOUS
GALVANIZING LINE MACHINE



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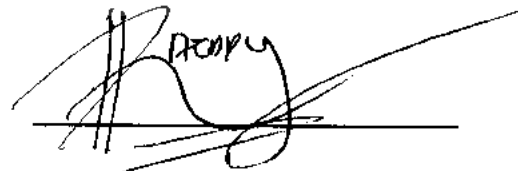
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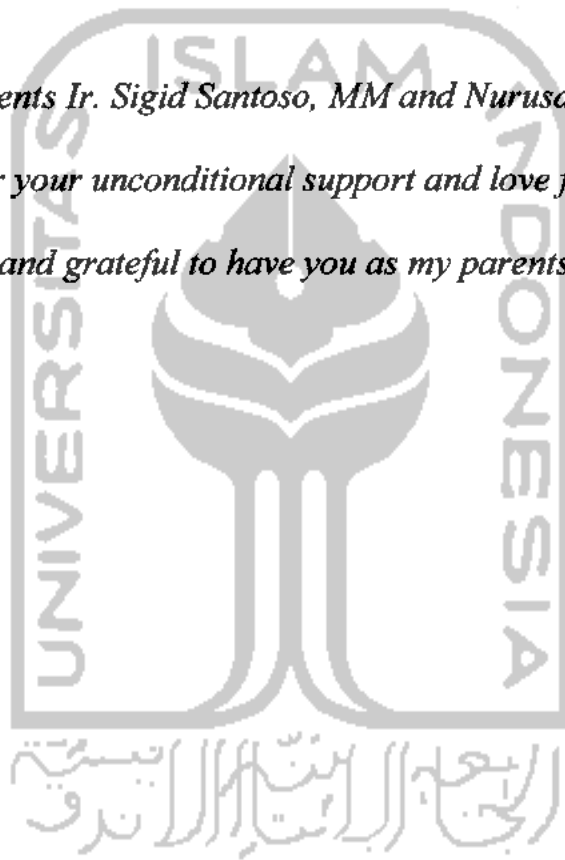
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DEDICATION PAGE

Alhamdulillah, I dedicated this thesis to:

My Lovely Parents Ir. Sigid Santoso, MM and Nurusani Ratnawati, Bsc

Thank you for your unconditional support and love for me, I am very honored and grateful to have you as my parents. I love you.



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I would like to thank Allah SWT for blessing my life in so many ways, also in helping me accomplished this thesis entitled “Developing Domestic Welding Electrode to Substitute Japan Made Welding Electrode at Overlap Seam Welding Machine in Continuous Galvanizing Line Machine” to obtain my Bachelor Degree in Universitas Islam Indonesia. Alhamdulillah.

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**DEVELOPING DOMESTIC WELDING ELECTRODE TO SUBSTITUTE
JAPAN MADE WELDING ELECTRODE AT OVERLAP SEAM WELDING
MACHINE IN CONTINUOUS GALVANIZING LINE MACHINE**

**By
Kusuma Sani Santosa**

Submitted to International Program, Departement of Industrial Engineering, Faculty of Industrial Technology, on June , 2010 in Partial Fulfillment of the Requirement for the degree of Sarjana Teknik Industri at Universitas Islam Indonesia

ABSTRACT

Nowadays, efficiency improvement is a main necessity. Continuous Galvanizing Line is a machine that produces galvanized iron sheet using continuous hot dip galvanizing as the coating process. A welding machine is equipped to join the strip of coil and make sure the process in Continuous Galvanizing Line machine runs continuously. The welding machine use Japan made welding electrode that is very expensive and have a long lead time. The purpose of this research is to develop a domestic welding electrode to substitute Japan made welding electrode and resolve its weakness. The domestic welding electrode developed is an alloy that made of 98.9% of Cu, 1% of Cr and 0.1% of Zr elements. The domestic welding electrode has a good welding quality to substitute the original Japan made welding electrode and reduce the cost of the welding electrode from Rp. 110.000.000 to Rp. 7.000.000.

KEYWORDS: *Continuous Galvanizing Line machine, welding, welding electrode, efficiency*

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