

**DESIGN & DEVELOP SIX SIGMA IMPLEMENTATION
TO IMPROVE PRODUCT QUALITY
IN REMANUFACTURING COMPANY**

By

ERWIN OKTARIYANTO
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SWISS GERMAN UNIVERSITY
The Prominence Tower
Jalan Jalur Sutera Barat No. 15, Alam Sutera
Tangerang, Banten 15143 - Indonesia

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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.



Erwin Oktariyanto, S.T.

Student

January 30, 2024

Date

Approved by:

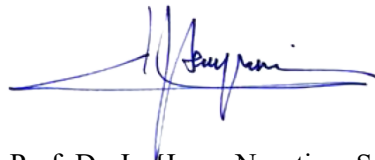


Iwan Halim Sahputra, S.T., M.Sc., Ph.D

Thesis Advisor

January 30, 2024

Date



Assoc. Prof. Dr. Ir. Henry Nasution, S.T., M.T., IPP

Thesis Co-Advisor

January 30, 2024

Date

Dr. Maulahikmah Galinium, S.Kom, M.Sc.

Dean

January 31, 2024

Date

Erwin Oktariyanto

ABSTRACT

DESIGN & DEVELOP SIX SIGMA IMPLEMENTATION TO IMPROVE PRODUCT QUALITY IN REMANUFACTURING COMPANY

By

Erwin Oktariyanto
Iwan Halim Saputra, S.T., M.Sc., Ph.D
Assoc. Prof. Dr. Ir. Henry Nasution, S.T., M.T., IPP

SWISS GERMAN UNIVERSITY

PT United Tractors Pandu Engineering (UTPE) is one of affiliated company of PT United Tractors Tbk., (UT) in Construction Machinery Business Sectors. UTPE is one of the leading remanufacturing companies in Indonesia. The high remanufacturing forecast reaching 160 billion dollars/year in the heavy equipment industry sectors is a promising business opportunity. However, the remanufacturing industry has a higher risk of product failure compared to original Equipment products. The Failure In Process (FIP) for Engine & Hydraulic Cylinder in the early 2023 is 8.3% with Sigma level at 3.74, it's needs the activity to suppress as little as possible, where FIP can be caused by Man/Method/Material/Machine factors. Six Sigma method is used in this research to reduce remanufacturing defective product. It can be concluded that improving quality can be achieved by using the Six Sigma method, it can reduce product FIP into 1.7% with Sigma level at 4.36, and can increase company profits due to decreased product failure cost (1.125 Bio IDR to 360 Mio IDR).

Keywords: Quality Improvement, Remanufacturing, Six Sigma, Product Failure.

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DEDICATION

I dedicate this thesis to my beloved family, extraordinary office colleagues,
the company I love, the lecturers I respect, fellow students I am proud of,
and for the future of my beloved country Indonesia.

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