

**DEVELOPING ERGONOMICS APPROACH FOR MANUAL SORTING AND
INSPECTION IN A PULP AND PAPER MANUFACTURING COMPANY**

By

Iodia Neyla Villarama

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SWISS GERMAN UNIVERSITY

The Prominence Tower

Jalan Jalur Sutera Barat No. 15, Alam Sutera

Tangerang, Banten 15413 - 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.

Iodia Neyla Villarama

Student

Date

Approved by:

Ir. Triarti Saraswati, M.Eng

Thesis Advisor

Date

SWISS GERMAN UNIVERSITY

Rindawati Maulina, S.T., M.T., M.Sc.

Thesis Co-Advisor

Date

Dr. Ir. Gembong Baskoro, M.Sc.

Dean

Date

Iodia Neyla Villarama

ABSTRACT**DEVELOPING ERGONOMICS APPROACH FOR MANUAL SORTING
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By

Iodia Neyla Villarama

Ir. Triarti Saraswati, M.Eng., Advisor

Rindawati Maulina, S.T., M.T., M.Sc, Co-Advisor

SWISS GERMAN UNIVERSITY

In a manufacturing company, manpower still plays an important role in the company. Although automated machines are commonly use these days, some of the works still need to be performed manually due to several reasons such as specific skills and accuracy. However, there are still tasks that are not suitable with the ergonomics perspective and this might result in pain, discomfort, or injury on workers' body parts, even more when the works are done repetitively and without standard operating procedure. This research aims to assess the working postures, improve the working methods, and develop standard operating procedure. Therefore, Nordic Questionnaire was distributed to the population sample of the workers in a pulp and paper manufacturing to find out the affected body parts. Through observation, photos were taken during the works to assess the working postures using REBA scoring to validate the workers' complaints. The working postures then recreated and analyzed using Jack Simulation software. The results show that postures such as squatting, sitting, kneeling, and reaching need to be eliminated, therefore it is necessary to redesign the tasks and supporting tools are required to finish the tasks. Time and motion study was

also conducted in this research, as the based to develop standard operating procedure to eliminate waste of time and waste of motion.

Keywords: Ergonomics, Nordic Questionnaire, REBA, Jack Simulation, Time and Motion Study, Standard Operating Procedure.





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DEDICATION

I dedicate this works

To my beloved family

To my supporting friends

To my lecturers



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First of all, I would like to express my gratitude to Allah SWT. for all of His strengths and blessings through the completion of my studies and this thesis work.

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