

FINAL PROJECT

**ANALYSIS OF THE IMPLEMENTATION OF
OCCUPATIONAL HEALTH AND SAFETY
(OHS) USING THE HIRARC METHOD
(CASE STUDY: RENOVATION OF THE
AUTOCLAVE ROOM IN THE QA AREA AT
PT AJINOMOTO MOJOKERTO)**



By :

ANNISA AMANDA FEBRIANTI
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**CIVIL ENGINEERING STUDY PROGRAM
FACULTY OF ENGINEERING
UNIVERSITAS 17 AGUSTUS 1945 SURABAYA
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2026**

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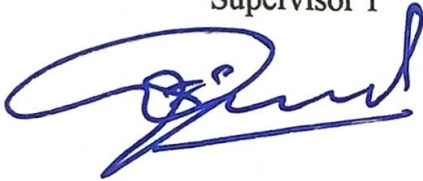
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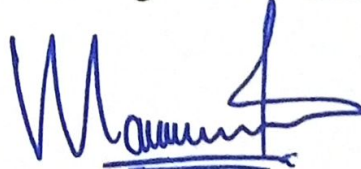


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“ANALYSIS OF THE IMPLEMENTATION OF OCCUPATIONAL HEALTH AND SAFETY (OHS) USING THE HIRARC METHOD (CASE STUDY: RENOVATION OF THE AUTOCLAVE ROOM IN THE QA AREA AT PT AJINOMOTO MOJOKERTO)”

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For this matter, I am willing to accept any sanctions in accordance with the laws and regulations applicable in Indonesia. I hereby make this statement truthfully and without any coercion from any party.

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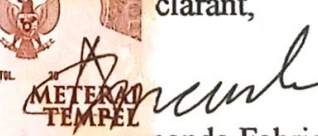
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PREFACE

Thanks to our God Almighty, who has bestowed His grace and guidance so that the researcher can complete the final project proposal properly. This proposal is compiled as one of the requirements for having a bachelor's degree in Civil Engineering at Universitas 17 Agustus 1945 Surabaya.

Therefore, for the completion of this final project, the researcher would like to express her deep thanks to:

1. Both parents, brothers, and sisters have provided support and prayers to motivate the researcher to keep going and not give up;
2. Ir. Michella Beatrix, S.T., M.T., as Head of Civil Engineering Study Program in Universitas 17 Agustus 1945 Surabaya; for the support, guidance, and opportunity provided to the researcher to continue her studies in the Civil Engineering Department at Universitas 17 Agustus 1945 Surabaya;
3. Aditya Rizkiardi. S.T., M.T. as Academic Advisor at the Civil Engineering Study Program in Universitas 17 Agustus 1945 Surabaya;
4. Mochamad Firmansyah, S.T., M.T. as Supervisor 1 for the Final Project Proposal at the Civil Engineering Study Program in Universitas 17 Agustus 1945 Surabaya;
5. Dr. Ir. Dika Ayu Safitri, S.T., M.T., Ph.D. as Supervisor 2 for the Final Project Proposal at the Civil Engineering Study Program in Universitas 17 Agustus 1945 Surabaya;
6. All of my lecturers at the Civil Engineering Study Program in Universitas 17 Agustus 1945 Surabaya;
7. All of the administrative staff at the Civil Engineering Study Program in Universitas 17 Agustus 1945 Surabaya;
8. As well as friends whom I cannot name, who have provided support and motivation to complete this Final Project.

Finally, the researcher realises that this report is still far from perfect and expects constructive criticism and suggestions for improvement in the future. The researcher hopes this Final Project Proposal is useful to the reader.

Surabaya, June 26 2026



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ABSTRACT

The construction sector is one of the industries with a high rate of workplace accidents, making the implementation of Occupational Health and Safety (OHS) an essential aspect of project execution. This study aims to identify work activities with the highest risk levels and determine appropriate risk control measures in the autoclave room renovation project in the QA area at PT Ajinomoto Mojokerto using the hazard identification, risk assessment, and risk control (HIRARC) method. This research employed a quantitative descriptive approach. Data were collected through field observations, work-scenario analysis, a literature review, and questionnaire surveys involving five respondents: two HSE personnel, one site manager, and two supervisors.

The results identified 69 risk variables associated with project activities. Four activities were classified as having the highest risk levels: ACP installation work (15,96), scaffolding work (15,20), frame/ceiling installation work (13,60), and epoxy floor grinding work (11,52). The recommended risk control measures include engineering controls, administrative controls, and the use of Personal Protective Equipment (PPE). These controls consist of safety nets, guardrails, safety lines, scaffolding catwalks, work permits, safety briefings, periodic medical check-ups, additional ventilation systems, exhaust fans, respirators, safety goggles, and full-body harnesses.

Keywords: OHS, HIRARC, Risk Assessment, Risk Control

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