

**HSE PROBLEM IN HIGH-RISE CONSTRUCTION PROJECT: CASE
STUDY OF 35-STORY BUILDING IN SURABAYA**

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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 study investigates the intricate safety risks in high-rise construction projects in Indonesia, exemplified by a 35-story skyscraper in Surabaya. Utilizing the DMAIC approach, it develops a comprehensive risk assessment plan integrating Hazard Identification Risk Assessment (HIRA) and Human Behavior Analysis (HBA). The findings highlight a significant correlation between human behavior and safety risks, revealing that incidents often stem from both intentional non-compliance and unintentional lack of awareness. The proposed risk anticipation program includes safety observation cards, training needs analysis, and safety communication campaigns to foster a culture of safety and continuous improvement. Key recommendations emphasize comprehensive safety training programs, increased on-site supervision, regular safety protocol reviews, effective visual communication strategies, and enhanced stakeholder collaboration. By implementing these measures, the study aims to significantly enhance safety practices, reduce risks, and foster a robust safety culture in high-rise construction projects across Indonesia, thereby addressing the unique challenges posed by rapid urbanization and economic development.

Keywords: Health, Safety, and Environment (HSE) Practices, Hazard Identification and Risk Assessment (HIRA), Human Behavior Analysis (HBA), Construction Safety Protocols, High-Rise Building Safety.

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DEDICATION

I dedicate this works to my long journey of life

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