

## **ABSTRACT**

Based on data from Minister of Manpower and Transmigration, the construction sector occupy the highest in workplace accidents in the amount of 32%. Work at height had the highest risk. Thus, workers and others in the workplace should be guaranteed safety. Therefore, a risk assessment and risk control needs to be done. The purpose of this study was to conduct a risk assessment and risk control on the job of mounting ring column and formwork at the height on the process of building construction *Skyline Tower Office and Condotel* Surabaya by PT Nusa Konstruksi Enjiniring.

This study was an observational study with cross sectional approach. The primary data obtained by interviews against labor and the measure of all sources of danger directly at the sites. Data collected were analyzed descriptively. In addition, secondary data were also obtained from the documents at PT Nusa Konstruksi Enjiniring.

The results showed that the ring mounting job column had 11 potential mechanical hazards with 24 total risk and formwork installation jobs had 6 to 20 total mechanical hazard risk. While the analysis and evaluation of occupational risks mounting ring column shows the results with the Priority category 3 (20-70) by 8 risk, Substansial (70-180) 3 as much risk, and Very High Risk by 13 risk. For analysis and risk evaluation formwork installation work shows the results of the Priority category 3 (20-70) by 5 risk and Very High Risk by 15 risk. The degree of control on the job column mounting ring that had a percentage of 65% and 75% for formwork installation. On the job of mounting column ring, there are 6 risk that suitable and 18 other risk still required consideration. While, 3 risk of formwork installation work also demonstrates the suitability and 17 other risk need to be considered.

Based on the research results, worker fell from a height has the greatest risk among other risks and there is still a residual risk has not been received in order to keep the work in progress. Recommendation that can be given is that Education about the importance of safe behavior and good use of PPE needs to be done so that the worker safety awareness will be felt by workers. However, if there are workers who are still unsafe behavior and improper use of PPE, the supervision and sanctions can be applied.

**Keywords:** Risk Assessment, Risk Control, Ring Column, Formwork