

## ABSTRAK

Keselamatan dan kesehatan kerja (K3) dalam suatu sektor industri khususnya industri manufaktur dan konstruksi merupakan salah satu aspek yang penting untuk mencegah terjadinya risiko adanya kecelakaan kerja serta menjamin lingkungan kerja yang aman bagi seluruh pekerja. Penelitian ini dilakukan di PT Asia Beton, sebuah perusahaan beton di Bojonegoro. Penelitian ini bertujuan untuk mengidentifikasi potensi bahaya, menilai risiko kecelakaan kerja, serta memberikan rekomendasi pengendalian risiko menggunakan metode HIRARC (*Hazard Identification Risk Assessment and Risk Control*) serta menentukan bobot prioritas pengendalian risiko menggunakan metode *Analytic Hierarchy Process* (AHP) untuk mengurangi terjadinya risiko kecelakaan kerja. Informasi data didapatkan melalui teknik wawancara, penyebaran kuesioner, dan observasi langsung di lapangan. Hasil penelitian HIRARC menghasilkan rekomendasi pengendalian risiko menurut studi literatur mendapatkan hasil dua *rating high*, satu *moderate* dan empat *low risk*. Rekomendasi pengendalian risiko dari hasil HIRARC dihitung bobot prioritas untuk mengurutkan alternatif solusi apabila di implementasikan berdasarkan nilai bobot alternatif. Alternatif pengendalian risiko kecelakaan kerja dilakukan berdasarkan nilai bobot yang paling tinggi hingga paling rendah.

Kata kunci : AHP, bobot prioritas, HIRARC, K3, dan pengendalian risiko.

## **ABSTRACT**

*Occupational safety and health (K3) in an industrial sector, especially the manufacturing and construction industries, is one of the important aspects to prevent the risk of work accidents and ensure a safe work environment for all workers. This study was conducted at PT Asia Beton, a concrete company in Bojonegoro. This study aims to identify potential hazards, assess the risk of work accidents, and provide recommendations for risk control using the HIRARC (Hazard Identification Risk Assessment and Risk Control) method and determine the priority weight of risk control using the Analytic Hierarchy Process (AHP) method to reduce the risk of work accidents. Data information was obtained through interview techniques, questionnaire distribution, and direct observation in the field. The results of the HIRARC study produced recommendations for risk control according to literature studies, obtaining two high ratings, one moderate and four low risk. Risk control recommendations from the HIRARC results are calculated by priority weight to sort alternative solutions if implemented based on the alternative weight value. Alternative control of work accident risks is carried out based on the highest to lowest weight values.*

*Keywords: AHP, priority weight, HIRARC, K3, and risk control.*