

## ABSTRACT

*PT XYZ is a heavy equipment rental service provider that has not yet implemented a structured occupational health and safety (OHS) management system, resulting in a high risk of workplace accidents. In accordance with applicable regulations, the company is required to implement worker protection measures. This study aims to identify, assess, and control occupational risks using the Hazard Identification, Risk Assessment, and Determining Control (HIRADC) method with a quantitative descriptive approach. Data were obtained through observation, interviews, and analysis of workplace accidents across three main areas: warehouse, welding and cutting, and maintenance and troubleshooting. The results of the study identified 31 potential hazards with varying risk categories: 6.5% extreme, 29% high, 29% moderate, and 35.5% low. Major hazards include slips and falls, neglect in the use of personal protective equipment (PPE), chemical exposure, and injuries caused by heavy machinery. Risk control measures were carried out through the implementation of stricter safety procedures, improvements to the work environment, and OHS training and awareness programs. The application of the HIRADC method has proven effective in reducing the risk of workplace accidents. The findings of this study are expected to serve as a reference for OHS implementation in similar industries to create a safer and more productive work environment.*

**Keywords:** *HIRADC, Occupational Health and Safety, Hazard Identification, Risk Assessment, Risk Control.*

## INTISARI

PT XYZ merupakan perusahaan penyedia jasa persewaan alat berat yang belum memiliki sistem manajemen keselamatan dan kesehatan kerja (K3) yang terstruktur, mengakibatkan tingginya risiko kecelakaan kerja. Berdasarkan regulasi yang berlaku, perusahaan wajib menerapkan upaya perlindungan tenaga kerja. Penelitian ini bertujuan untuk mengidentifikasi, menilai, dan mengendalikan risiko kerja menggunakan metode *Hazard Identification, Risk Assessment, and Determining Control* (HIRADC) dengan pendekatan deskriptif kuantitatif. Data diperoleh melalui observasi, wawancara, dan analisis kecelakaan kerja di tiga area utama: gudang, pengelasan dan pemotongan, serta *maintenance* dan *troubleshooting*. Hasil penelitian mengidentifikasi 31 potensi bahaya dengan kategori risiko bervariasi, yaitu 6,5% *ekstrem*, 29% *high*, 29% *moderate*, dan 35,5% *low*. Bahaya utama meliputi terpeleset, kelalaian penggunaan alat pelindung diri (APD), paparan bahan kimia, serta cedera akibat alat berat. Pengendalian risiko dilakukan melalui penerapan prosedur keselamatan yang lebih ketat, perbaikan lingkungan kerja, serta pelatihan dan sosialisasi K3. Penerapan metode HIRADC terbukti efektif dalam mengurangi risiko kecelakaan kerja. Hasil penelitian ini diharapkan dapat menjadi referensi dalam implementasi K3 di industri serupa untuk menciptakan lingkungan kerja yang lebih aman dan produktif.

**Kata kunci:** HIRADC, Keselamatan dan Kesehatan Kerja, Identifikasi Bahaya, Penilaian Risiko, Pengendalian Risiko.