

## **ABSTRAK**

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### **ANALISIS RISIKO KESELAMATAN DAN KESEHATAN KERJA PADA PERUSAHAAN MANUFAKTUR KARET (Studi Kasus: PT XYZ)** Skripsi, Fakultas Sains dan Teknologi (2023)

(xiv + 89 halaman; 67 gambar; 14 tabel; 6 lampiran)

PT XYZ merupakan perusahaan yang bergerak di bidang agri maufaktur karet. PT XYZ kerap dihadapkan dengan permasalahan kecelakaan kerja. Berdasarkan data riwayat kecelakaan kerja PT XYZ 2021, terdapat sebanyak 13 kejadian kecelakaan kerja. Tujuan penelitian ini yaitu menganalisis risiko keselamatan kerja dengan menggunakan *Hazard Identification Risk Assessment and Risk Control* (HIRARC) dan OWAS (*Ovako Working Posture Analysis*), sehingga dapat diusulkan perbaikannya. Metode pengumpulan data yang dilakukan yaitu wawancara terhadap *area manager*, kepala pabrik dan mandor. Selain itu, dilakukan observasi proses produksi dan data riwayat kecelakaan kerja PT XYZ. Dari hasil analisis HIRARC, terdapat 11 *work activity* dan 16 *sub-work activity* yang teridentifikasi terjadinya bahaya kecelakaan kerja. Sebanyak 14 *sub-work activity* tergolong *risk level medium* dan dua lainnya tergolong *high*. Terdapat berbagai *recommended control measures* yang dapat dilakukan dalam meminimalkan kecelakaan kerja yang ada, diantaranya yaitu *substitution*, APD, *administrative control*, *hazard elimination*, dan *engineering control*. Upaya *substitution* yang dapat dilakukan yaitu memodifikasi gerobak, dan memperlengkapi kamar jereng dengan CCTV. APD yang dapat digunakan yaitu sarung tangan anti potong, sarung tangan anti hancur, dan sepatu *boots* anti *slip*. *Administrative control* yang dapat dilakukan yaitu menyusun *Standard Operating Procedure* pada proses yang dibutuhkan. *Hazard elimination* yang dapat dilakukan yaitu membuat jalur lalu lintas pemisah antara alat berat dengan pekerja, membuat tongkat pendorong, tongkat jaring sampah, dan *belt conveyor*. *Engineering control* yang dapat dilakukan yaitu meninggikan dan menambah tiang pelindung. *Sub -wok activity* membawa karet menuju alat timbang berpotensi *lifting hazard* berisiko cedera punggung yang disebabkan mengangkat beban lebih dari 35kg dengan posisi kerja yang tidak baik. Dari hasil analisis OWAS, dapat diketahui bahwa posisi kerja tersebut bernilai 4 atau sangat berbahaya dan memerlukan perbaikan segera. Diberikan usulan berupa *conveyor belt* yang dilengkapi timbangan otomatis, dari hasil OWAS didapatkan nilai 1 atau aman. Dengan kata lain, posisi usulan perbaikan dapat meminimalisir bahaya dan bersifat aman.

Kata Kunci : HIRARC, OWAS, K3

Referensi : 19 (2002-2022)

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### **ANALYSIS OF OCCUPATIONAL HEALTH AND SAFETY RISK IN RUBBER MANUFACTURING COMPANIES (Case Study : PT XYZ)**

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(xiv + 89 pages; 67 pictures; 14 tables; 6 appendices)

PT XYZ is a company engaged in the rubber manufacturing sector. PT XYZ often faced with the problem of work accidents. Based on historical data PT XYZ 2021 work accidents, there were 13 work accident incidents. Purpose this research is to analyze the risk of occupational safety by using Hazard Identification Risk Assessment and Risk Control (HIRARC) and OWAS (Ovako Working Posture Analysis), so that improvements can be proposed. The data collection method used was interviewing the area manager, factory head, and foreman. In addition, observation of the production process is carried out and PT XYZ works on accident history data. From the results of the HIRARC analysis, there are 11 work activities and 16 sub-work activities were identified as a hazardous work accidents. A total of 14 sub-work activities are classified as medium and risk level the other two are classified as high. There are various recommended control measures that can be done to minimize existing work accidents, including substitution, PPE, administrative control, hazard elimination, and engineering controls. Substitution efforts that can be done are modifying the cart, and equipping the jerry can with CCTV. PPE that can be used is anti-cut gloves, anti-crush gloves, and non-slip boots. Administrative control can be done namely develop Standard Operating Procedures on the required processes. Hazard elimination that can be done is to creating a dividing traffic lane between heavy equipment with workers, making push rods, trash net sticks, and conveyor belts. Engineering control that can be done is to raise and add a guardrail. Sub-work activity brings the rubber to the tool weighing the potential lifting hazard risk of causing back injury lifting weights of more than 35 kg with a bad working position. From the results OWAS analysis, it can be seen that the work position is worth 4 or very dangerous and requires immediate repair. Given a suggestion in the form of a conveyor belt equipped with automatic scales, the OWAS results obtained a value of 1 or safe. In other words, the position of the proposed improvement can minimize the hazard and are safe.

Kata Kunci : HIRARC, OWAS, K3

Referensi : 19 (2002-2022)