

ABSTRAK

Aktivitas kerja di Departemen Mekanik PT XYZ melibatkan penggunaan mesin, peralatan kerja, serta material yang berpotensi menimbulkan bahaya. Selain itu, masih ditemukan perilaku tidak aman (*unsafe behavior*) terkait penggunaan alat pelindung diri (APD) yang dapat meningkatkan risiko terjadinya kecelakaan kerja. Penelitian ini bertujuan mengidentifikasi potensi bahaya, menilai tingkat risiko kerja, mengevaluasi *safety behavior* pekerja terhadap kepatuhan penggunaan alat pelindung diri (APD), serta menyusun usulan perbaikan untuk meningkatkan keselamatan dan kesehatan kerja. Metode yang digunakan adalah *Hazard Identification, Risk Assessment, and Risk Control* (HIRARC) untuk identifikasi bahaya dan penilaian risiko, serta *Behavior Based Safety* (BBS) dengan *Critical Behavior Checklist* (CBC) untuk mengevaluasi perilaku keselamatan pekerja. Tingkat perilaku keselamatan diukur menggunakan *Safety Behavior Index* (SBI). Hasil penelitian menunjukkan terdapat 21 aktivitas kerja yang dianalisis, terdiri atas 1 aktivitas kategori *extreme risk*, 13 *high risk*, 6 *moderate risk*, dan 2 *low risk*. Risiko tertinggi ditemukan pada aktivitas pemotongan material menggunakan gerinda tangan dengan nilai risiko 20. Hasil observasi menunjukkan 183 *safe behavior* dan 21 *unsafe behavior* dari 204 pengamatan dengan nilai SBI sebesar 90% yang termasuk kategori aman. Meskipun demikian, masih terdapat 10% *unsafe behavior* yang memerlukan perhatian dan pengendalian lebih lanjut. Usulan perbaikan meliputi penguatan pengawasan APD, *briefing* keselamatan harian, pelatihan APD berkala, penerapan *reward and consequence*, serta penggunaan *arm protector*. Penelitian ini juga mendukung pencapaian *Sustainable Development Goals* (SDGs), khususnya tujuan ke-3 tentang kehidupan sehat dan kesejahteraan serta tujuan ke-8 tentang pekerjaan layak dan pertumbuhan ekonomi yang menegaskan pentingnya keselamatan dan kesehatan kerja di lingkungan industri.

Kata kunci : HIRARC, *Behavior Based Safety* (BBS), Kepatuhan APD, *Critical Behavior Checklist* (CBC), *Safe behavior Index* (SBI), SDGs 3 dan SDGs 8.

ABSTRACT

Work activities in the Mechanical Department of PT XYZ involve the use of machines, work equipment, and materials that have the potential to cause hazards. In addition, unsafe behavior related to the use of personal protective equipment (PPE) is still found which can increase the risk of work accidents. This study aims to identify potential hazards, assess the level of work risk, evaluate worker safety behavior regarding compliance with the use of personal protective equipment (PPE), and develop improvement proposals to improve occupational safety and health. The methods used are Hazard Identification, Risk Assessment, and Risk Control (HIRARC) for hazard identification and risk assessment, and Behavior Based Safety (BBS) with Critical Behavior Checklist (CBC) to evaluate worker safety behavior. The level of safety behavior is measured using the Safety Behavior Index (SBI). The results of the study show that there are 21 work activities analyzed, consisting of 1 activity in the extreme risk category, 13 high risk, 6 moderate risk, and 2 low risk. The highest risk was found in material Cutting activities using a hand grinder with a risk value of 20. The observation results showed 183 safe behaviors and 21 unsafe behaviors from 204 observations with an SBI value of 90% which is included in the safe category. However, there are still 10% unsafe behaviors that require further attention and control. Suggestions for improvement include strengthening PPE supervision, daily safety briefings, regular PPE training, the implementation of rewards and consequences, and the use of arm protectors. This study also supports the achievement of Sustainable Development Goals (SDGs), especially goal 3 on healthy lives and well-being and goal 8 on decent work and economic growth which emphasizes the importance of occupational safety and health in industrial environments.

Keywords : *HIRARC, Behavior-Based Safety (BBS), PPE Compliance, Critical Behavior Checklist (CBC), Safe behavior Index (SBI), SDGs 3 and 8.*