

## ABSTRAK

# IDENTIFIKASI KESELAMATAN DAN KESEHATAN KERJA DENGAN METODE HIRADC PADA AREA MESIN BOILER DI PT. PRIMUS SANUS COOKING OIL INDUSTRIAL

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PT. Primus Sanus Cooking Oil Industrial (Priscolin) merupakan perusahaan pengolahan minyak goreng yang menggunakan mesin boiler sebagai sumber energi panas utama dalam proses produksinya. Aktivitas di area mesin boiler memiliki potensi bahaya tinggi seperti suhu ekstrem, tekanan uap, dan paparan bahan kimia yang dapat menimbulkan kecelakaan kerja. Penelitian ini bertujuan untuk mengidentifikasi potensi bahaya, menilai tingkat risiko, serta menentukan langkah pengendalian menggunakan metode Hazard Identification, Risk Assessment, and Determining Control (HIRADC). Metode penelitian dilakukan melalui observasi langsung di area kerja, wawancara dengan operator, dan pengumpulan data kecelakaan kerja periode September 2024 – Februari 2025. Analisis dilakukan dengan memetakan setiap tahapan aktivitas mesin boiler, kemudian menilai risiko berdasarkan tingkat kemungkinan dan keparahan dampak, serta menentukan strategi pengendalian sesuai hierarki pengendalian risiko. Hasil penelitian menunjukkan bahwa potensi bahaya tertinggi terdapat pada tahap pemeriksaan awal mesin, pengisian bahan bakar, dan pemanasan awal. Faktor utama penyebab risiko meliputi kurangnya kepatuhan terhadap prosedur kerja, penggunaan alat pelindung diri (APD) yang tidak konsisten, serta lemahnya pengawasan keselamatan. Penerapan metode HIRADC terbukti efektif dalam mengidentifikasi bahaya secara sistematis dan menyusun prioritas tindakan pengendalian. Rekomendasi yang dihasilkan meliputi penerapan SOP secara ketat, peningkatan pelatihan K3, inspeksi rutin peralatan, serta pengawasan berkelanjutan untuk menciptakan lingkungan kerja yang aman dan produktif.

**Kata Kunci:** Keselamatan dan Kesehatan Kerja (K3), HIRADC, Boiler, Identifikasi Bahaya, Pengendalian Risiko

## **ABSTRACT**

### ***Identification of Occupational Safety and Health Using the HIRADC Method in the Boiler Area at PT. Primus Sanus Cooking Oil Industrial***

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*PT. Primus Sanus Cooking Oil Industrial (Priscolin) is a cooking oil processing company that utilizes boiler machines as the main source of heat energy in its production process. Activities in the boiler area present high potential hazards such as extreme temperatures, steam pressure, and exposure to chemicals that may cause workplace accidents. This study aims to identify potential hazards, assess the level of risk, and determine appropriate control measures using the Hazard Identification, Risk Assessment, and Determining Control (HIRADC) method. The research was conducted through direct observation in the workplace, interviews with operators, and analysis of occupational accident data recorded between September 2024 and February 2025. Each stage of boiler operation was analyzed to identify hazards, evaluate risks based on likelihood and severity, and determine suitable control measures according to the hierarchy of risk control. The results indicate that the highest potential hazards occur during the initial machine inspection, fuel filling, and preheating stages. The main contributing factors include non-compliance with standard operating procedures (SOP), inconsistent use of personal protective equipment (PPE), and insufficient safety supervision. The application of the HIRADC method proved effective in systematically identifying hazards and establishing prioritized risk control measures. Recommendations include strict adherence to SOP, enhanced safety training, regular equipment inspections, and continuous monitoring to ensure a safe and productive working environment.*

**Keywords:** *Occupational Health and Safety (OHS), HIRADC, Boiler, Hazard Identification, Risk Control*

