

**MITIGASI RISIKO KESELAMATAN DAN KESEHATAN KERJA**  
**PETUGAS PERAWATAN JALAN REL MENGGUNAKAN METODE**  
**HIRARC DI PT KAI (PERSERO) DAOP 6 YOGYAKARTA**

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**INTISARI**

**Latar Belakang:** Keselamatan dan kesehatan kerja merupakan faktor yang penting dalam terlaksananya kegiatan perusahaan. Setelah observasi dilakukan di PT. KAI Yogyakarta khususnya dibagian perawatan jalan rel kereta ditemukan beberapa risiko kerja yang dapat dialami oleh pekerja unit Jalan Rel dan Jembatan dari segi keselamatan dan kesehatan yang dapat menimbulkan kecelakaan dan penyakit kerja pada saat melakukan aktivitas pekerjaan. Risiko kecelakaan dan kesehatan kerja paling sering terjadi di pekerjaan perawatan yang dapat mengakibatkan kerugian pada perusahaan.

**Tujuan:** Penelitian ini bertujuan menentukan risiko yang berpotensi terjadi pada proses perawatan jalan rel kereta di PT. KAI Yogyakarta serta urutan prioritas dalam mitigasi risiko K3 untuk meminimalkan terjadinya risiko.

**Metode Penelitian:** Metode yang digunakan yaitu Hazard Identification, Risk assessment and Risk Control (HIRARC) dan Analytical Hierarchy Process (AHP).

**Hasil:** Analisis HIRARC pada proses perawatan jalan rel kereta di PT. KAI Yogyakarta untuk mengetahui identifikasi risiko, dan Potensi risiko yang terbesar terjadi pada jalan rel kereta di PT. KAI Yogyakarta.

**Kesimpulan:** Prioritas rancangan strategi mitigasi terdapat 3 keputusan untuk membantu meminimalisir risiko pada proses perawatan jalan rel kereta yaitu: evaluasi dan revisi SOP, maintenance peralatan dan training pekerja.

**Kata-kunci:** Mitigasi risiko, Keselamatan dan Kesehatan Kerja (K3), HIRARC, AHP.

**MITIGATING WORK SAFETY AND HEALTH RISKS OF ROAD AND RAIL  
MAINTENANCE WORKERS USING THE HIRARC METHOD AT PT KAI  
(PERSERO) DAOP 6 YOGYAKARTA**

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**ABSTRACT**

**Background:** Occupational safety and health are important factors in the execution of company activities. Following observations carried out at PT. KAI Yogyakarta, specifically in the railway track maintenance division, several occupational risks were identified that workers in the Track and Bridge Unit could potentially encounter in terms of safety and health, which could lead to accidents and occupational illnesses during work activities. The most common accidents and occupational health risks occur in maintenance work, which can result in losses for the company.

**Purpose:** This study aims to identify potential risks in the railway track maintenance process at PT. KAI Yogyakarta, as well as the priority sequence for K3 risk mitigation to minimize the occurrence of risks.

**Research Method:** The methods used are Hazard Identification, Risk Assessment and Risk Control (HIRARC), and Analytical Hierarchy Process (AHP).

**Results:** The HIRARC analysis of the railway track maintenance process at PT. KAI Yogyakarta is conducted to identify risks, with the greatest potential risks occurring on the railway tracks at PT. KAI Yogyakarta.

**Conclusion:** The priority design of mitigation strategies involves three decisions to help minimize risks in the railway track maintenance process: evaluation and revision of Standard Operating Procedures (SOP), equipment maintenance, and worker training.

**Keywords:** Risk mitigation, Occupational Health and Safety (OHS), HIRARC, AHP.