

ANALISIS PENERAPAN RISIKO K3 PADA KONSTRUKSI PEMBANGUNAN TANGGUL PENAHAN BANJIR ROB DERMAGA PELRA PELABUHAN SUNDA KELAPA, JAKARTA UTARA

Rahmi Putri Agus¹

Program Studi Teknik Sipil, Fakultas Farmasi, Sains dan Teknologi

E-mail : rahmiputri0912@gmail.com

Abstrak

Pelabuhan Sunda Kelapa di Jakarta Utara menghadapi tantangan serius berupa banjir rob yang mengganggu operasional dan membahayakan infrastruktur serta keselamatan pekerja. Untuk mengatasi permasalahan tersebut, pemerintah melaksanakan proyek pembangunan tanggul penahan banjir rob di Dermaga Pelra, yang memiliki tingkat kompleksitas dan risiko tinggi. Penelitian ini bertujuan untuk mengidentifikasi jenis-jenis risiko Kesehatan dan Keselamatan Kerja (K3) yang muncul selama proses konstruksi, menganalisis tingkat bahaya dan dampaknya terhadap tenaga kerja, serta mengevaluasi efektivitas penerapan sistem K3 di lapangan. Metode pengumpulan data dilakukan melalui kuesioner kepada pekerja proyek, dengan analisis menggunakan HIRADC dan Job Safety Analysis (JSA). Hasil penelitian menunjukkan terdapat 10 potensi risiko utama, dengan 2 kategori Ekstrem, 7 kategori Tinggi, dan 1 kategori Sedang. Risiko tertinggi berasal dari faktor lingkungan pesisir seperti cuaca ekstrem dan pekerjaan di area perairan. Penerapan sistem K3 dinilai efektif melalui safety briefing rutin, penyediaan APD, SOP tertulis, dan pengawasan K3. Kesimpulan penelitian menegaskan perlunya pengendalian lebih lanjut terhadap risiko kategori Ekstrem dan Tinggi, khususnya melalui penguatan pengawasan di area perairan, pengaturan jam kerja, serta penghentian sementara aktivitas saat cuaca ekstrem.

Kata kunci : **Konstruksi tanggul penahan banjir, Kesehatan dan Keselamatan Kerja (K3), Analisis risiko (HIRADC, JSA), Alat Pelindung Diri (APD)**

Abstract

Sunda Kelapa Port in North Jakarta faces serious challenges from tidal flooding (rob) that disrupts operations and threatens infrastructure as well as worker safety. To address this issue, the government initiated the construction of a flood barrier at Dermaga Pelra, a project characterized by high complexity and significant risks due to its coastal location, which is vulnerable to extreme weather, water inundation, and environmental disturbances. This study aims to identify occupational health and safety (OHS) risks during the construction process, analyze their severity and impact on workers, and evaluate the effectiveness of OHS implementation on site. Data collection was conducted through questionnaires distributed to project workers, with analysis using Hazard Identification, Risk Assessment, and Determining Control (HIRADC) and Job Safety Analysis (JSA). The findings reveal ten major potential risks, including drowning, extreme weather, heavy equipment collisions, falling materials, slips, dust exposure, noise, work fatigue, marine transport accidents, and inadequate lighting during night work. Risk assessment results show two risks categorized as Extreme, seven as High, and one as Medium, with the highest risks arising from coastal environmental factors such as extreme weather and work near the shoreline. OHS implementation was rated highly effective, supported by routine safety briefings, provision of personal protective equipment (PPE), written standard operating procedures (SOPs), and supervision by OHS officers. The study concludes that stronger control measures are required for Extreme and High risks, particularly through enhanced supervision in water areas, regulation of working hours to reduce fatigue, and temporary suspension of activities during extreme weather conditions.

Keywords: *Flood barrier construction, Occupational Health and Safety (OHS), Risk assessment (HIRADC, JSA), Personal Protective Equipment (PPE)*