ABSTRAK

Perkembangan proyek konstruksi di Indonesia, khususnya pada pekerjaan jembatan, memiliki tingkat risiko keselamatan kerja yang relatif tinggi akibat pekerjaan pada ketinggian, penggunaan struktur kabel dan rangka baja, serta kondisi medan yang sulit. Pemerintah telah mewajibkan penerapan Sistem Manajemen Keselamatan Konstruksi (SMKK) melalui Peraturan Menteri PUPR No. 10 Tahun 2021, namun implementasinya di lapangan sering kali belum optimal. Penelitian ini bertujuan untuk menganalisis pelaksanaan SMKK, mengevaluasi efektivitasnya, serta mengidentifikasi tantangan penerapannya pada Proyek Jembatan Gantung Koto Rawang, Sumatera Barat. Metode penelitian yang digunakan adalah metode kuantitatif dengan pengumpulan data primer melalui kuesioner terhadap 25 responden pekerja proyek, serta data sekunder berupa SOP perusahaan dan jurnal penelitian terdahulu. Data dianalisis menggunakan uji validitas (Pearson Correlation), uji reliabilitas (Cronbach's Alpha), dan analisa ranking (mean). Hasil penelitian menunjukkan bahwa dari 600 jawaban terhadap 24 indikator faktor pelaksanaan K3, sebanyak 92,6% responden menyatakan setuju dan sangat setuju, yang menandakan pelaksanaan SMKK secara umum sudah berjalan baik. Seluruh butir instrumen pada kelima variabel dinyatakan valid, dan empat dari lima variabel (Performa/Kinerja, Kesehatan, Keselamatan, dan Lingkungan Kerja) dinyatakan reliabel, kecuali variabel Pekerjaan/Fasilitas (Alpha = 0,372) yang tidak reliabel. Tantangan utama yang teridentifikasi meliputi jaminan kesehatan kerja yang belum optimal, kompetensi teknis pekerja dalam pengoperasian peralatan, serta konsistensi kelayakan fasilitas kerja. Penelitian ini merekomendasikan peningkatan kejelasan jaminan kesehatan, pelatihan berkala prosedur kerja, dan pengawasan rutin untuk meningkatkan efektivitas SMKK secara berkelanjutan.

Kata kunci: Sistem Manajemen Keselamatan Konstruksi (SMKK), keselamatan dan kesehatan kerja, jembatan gantung, validitas dan reliabilitas, uji kuantitatif

ABSTRACT

The development of construction projects in Indonesia, particularly bridge construction, carries a relatively high level of occupational safety risk due to work performed at height, the use of cable and steel-frame structures, and difficult terrain conditions. The Indonesian government requires the implementation of a Construction Safety Management System (SMKK) under Ministerial Regulation of PUPR No. 10 of 2021, yet field implementation often remains suboptimal. This study aims to analyze the implementation of SMKK, evaluate its effectiveness, and identify the challenges encountered in its application at the Koto Rawang Suspension Bridge Project in West Sumatra. A quantitative research method was employed, with primary data collected through questionnaires distributed to 25 project worker respondents, supplemented by secondary data from company standard operating procedures and prior research journals. Data were analyzed using validity testing (Pearson Correlation), reliability testing (Cronbach's Alpha), and ranking analysis (mean). The results show that out of 600 responses across 24 occupational health and safety implementation indicators, 92.6% of respondents answered agree or strongly agree, indicating that SMKK implementation has generally run well. All items across the five variables were found valid, and four of the five variables (Performance, Health, Safety, and Work Environment) were found reliable, except for the Work/Facilities variable (Alpha = 0.372), which was not reliable. The main challenges identified include inadequate health insurance assurance for workers, workers' technical competence in operating equipment, and inconsistent feasibility of work facilities. This study recommends improving the clarity of health insurance coverage, conducting regular training on work procedures, and increasing routine supervision to sustainably improve SMKK effectiveness.

Keywords: *Construction Safety Management System (SMKK), occupational health and safety, suspension bridge, validity and reliability, quantitative testing*