Perancangan Standar Penenganan Sumber Bahaya Untuk Peningkatan Keselamatan Operasi Bus Rapid Transit = Design of Hazard Management Standart for Improving the Safety of Bus Rapid Transit Operations

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Abstrak

Penelitian ini menganalisis hazard keselamatan operasi Bus Transjakarta menggunakan system based risk analysis dengan Partial Least Square â Structural Equation Modeling, qualitative expert judgement pada pengukuran mental workload dan risiko musculoskeletal, dan SCHAZOP (Safety Culture Hazard and Operability Studies). 404 pramudi Transjakarta berpartisipasi dalam survei. Hasil penelitian menunjukkan bahwa peningkatan 1 poin pada performance iklim keselamatan akan menurunkan performance pelanggaran keselamatan sebesar 0.638. Peningkatan 1 poin pada performance indikator pemberdayaan pramudi dalam manajemen keselamatan (SC2) akan meningkatkan performance iklim keselamatan sebesar 0.2538. Peningkatan 1 poin pada deskriptor prioritas, komitmen, dan kompetensi dalam manajemen keselamatan (SC1) akan menyebabkan peningkatan performansi variabel iklim keselamatan sebesar 0.159. Analisis jalur pengaruh yang signifikan adalah dimulai dari iklim keselamatan â motivasi keselamatan â perilaku keselamatan â kesadaran keselamatan â pelanggaran keselamatan. Efek moderasi iklim keselamatan memiliki pengaruh yang signifikan terhadap pelanggaran keselamatan. Pengukuran mental workload menunjukkan level tinggi dan keluhan musculoskeletal yang terbanyak adalah pada leher, betis dan telapak kaki. Rekomendasi pada upaya pencegahan pelanggaran keselamatan untuk operator bus Transjakarta di Jakarta diberikan berupa standar komunikasi keselamatan untuk operasi BRT, standar penanganan hazard untuk operasi BRT, standar penentuan program safety rutin, standar program pelatihan keselamatan untuk pramudi BRT, dan standar audit keselamatan operasi BRT, standar pengendalian beban kerja mental yang berlebih dan standar pencegahan risiko gangguan musculoskeletal

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This study analyzed Transjakarta operation hazard by using three approaches; the first was a system-based risk analysis using Partial Least Square - Structural Equation Modeling. The second was a qualitative expert assessment on the measurement of mental workload and musculoskeletal risk, and the third was SCHAZOP (Safety Culture Hazard and Operability Studies). We assisted of 404 Transjakarta drivers in the survey. Hypothesis test results and importance-performance map analysis showed that an increase of 1 point in the safety climate performance would reduce the performance of the safety violation variable by 0.638. An increase of 1 point in the performance indicators for the empowerment of drivers in safety management (SC2) will increase the performance of the safety climate variable by 0.2538. An increase of 1 point in the priority descriptors, commitments, and competencies in safety management (SC1) will cause an increase in the performance of the safety climate variable by 0.159. The path analysis of significant influence started with safety climate â safety motivation â safety behavior â safety awareness â safety violations The moderation effect of the safety climate has a significant causal relationship to a safety violation. Mental workload measurements show high levels, and most musculoskeletal complaints were on the neck, calves, and soles of the feet. Recommendations for Transjakarta bus operators in Jakarta included safety standards

for BRT operations, safety handling standards for BRT operations, routine safety program for BRT operations, and BRT services safety audit standards