

ABSTRAK

ANALISIS KERUSAKAN JALAN DENGAN METODE *SURFACE DISTRESS INDEX (SDI)* BERBASIS SPASIAL DI JALAN H.M. NOERDIN PANDJI STA 0+000 – 10+400

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Jalan merupakan infrastruktur transportasi yang berperan penting dalam mendukung aktivitas ekonomi dan mobilitas masyarakat. Penurunan kualitas perkerasan akibat beban lalu lintas, faktor lingkungan, dan kurangnya pemeliharaan dapat menurunkan tingkat pelayanan jalan. Penelitian ini bertujuan untuk menganalisis kondisi perkerasan lentur serta memetakan sebaran kerusakan pada ruas Jalan H.M. Noerdin Pandji Kota Palembang sepanjang $\pm 10,4$ km menggunakan metode *Surface Distress Index (SDI)* berdasarkan pedoman Direktorat Jenderal Bina Marga. Metode yang digunakan adalah pendekatan kuantitatif melalui survei visual lapangan dan studi dokumentasi. Setiap segmen jalan diidentifikasi jenis kerusakannya, seperti retak, lubang, alur, dan pelepasan butir, kemudian dinilai berdasarkan parameter luas, tingkat keparahan, jumlah, dan kedalaman untuk memperoleh nilai SDI. Hasil penelitian menunjukkan variasi kondisi jalan dari kategori baik hingga rusak berat. Berdasarkan nilai SDI, direkomendasikan penanganan berupa pemeliharaan rutin, *overlay*, atau rehabilitasi struktural sesuai tingkat kerusakan.

Kata Kunci: Jalan, Perkerasan Lentur, Kerusakan Jalan, *Surface Distress Index (SDI)*, Pemetaan Kerusakan, Jalan H.M. Noerdin Pandji

ABSTRACT

ROAD DAMAGE ANALYSIS USING THE SPATIAL-BASED SURFACE DISTURBANCE INDEX (SDI) METHOD ON H.M. NOERDIN PANDJI STREET STA 0+000 – 10+400

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Roads are transportation infrastructure that play an important role in supporting economic activities and community mobility. Deterioration of pavement quality due to traffic loads, environmental factors, and lack of maintenance can reduce the level of road service. This study aims to analyze the condition of flexible pavement and map the distribution of damage on Jalan H.M. Noerdin Pandji, Palembang City, along $\pm 10,4$ km using the Surface Distress Index (SDI) method based on the guidelines of the Directorate General of Highways. The method used is a quantitative approach through field visual surveys and documentation studies. Each road segment is identified for the type of damage, such as cracks, potholes, grooves, and grain detachment, then assessed based on the parameters of area, severity, number, and depth to obtain the SDI value. The results of the study show variations in road conditions from good to severely damaged categories. Based on the SDI value, recommended treatment in the form of routine maintenance, overlay, or structural rehabilitation according to the level of damage.

Keywords: *Road, Flexible Pavement, Road Distress, Surface Distress Index (SDI), Damage Mapping, H.M. Noerdin Pandji Street*