

ABSTRAK

Persimpangan tak bersinyal merupakan salah satu titik yang memiliki potensi tinggi terjadinya konflik lalu lintas karena menjadi lokasi pertemuan arus kendaraan dari berbagai arah. Penelitian ini bertujuan untuk mengidentifikasi jenis konflik lalu lintas, mengevaluasi tingkat keselamatan berdasarkan nilai *Time to Accident* (TA), serta memberikan rekomendasi upaya peningkatan keselamatan pada Simpang Empat Jalan Mayjen Yusuf Singedekane, Keramasan, Kota Palembang. Hasil penelitian menunjukkan bahwa kapasitas simpang sebesar 6.487 smp/jam, dengan volume lalu lintas sebesar 2.561 smp/jam dan nilai derajat kejenuhan (DJ) sebesar 0,40, sehingga kinerja simpang masih tergolong baik karena nilai DJ berada di bawah batas 0,85. Namun, dari hasil analisis konflik lalu lintas diperoleh total 5.001 konflik selama tiga hari pengamatan, yang didominasi oleh konflik *crossing* sebanyak 1.983 konflik, diikuti *merging* sebanyak 1.371 konflik, *diverging* sebanyak 1.197 konflik, dan *weaving* sebanyak 422 konflik. Hasil analisis menunjukkan bahwa sebagian besar konflik memiliki nilai kurang dari 1 detik sehingga termasuk kategori konflik serius, yang mengindikasikan masih tingginya potensi kecelakaan di lokasi penelitian. Maka dapat disimpulkan, kinerja simpang masih mampu melayani arus lalu lintas dengan baik, aspek keselamatan perlu mendapat perhatian melalui peningkatan rambu dan marka jalan, pengaturan pergerakan kendaraan, serta peningkatan disiplin pengguna jalan guna mengurangi potensi konflik dan risiko kecelakaan.

Kata kunci: Persimpangan tak bersinyal, *Traffic Conflict Technique* (TCT), *Time to Accident* (TA), Derajat Kejenuhan, Keselamatan Lalu Lintas.

ABSTRACT

Unsignalized intersections are among the locations with the highest potential for traffic conflicts, as they serve as meeting points for traffic flows from multiple directions. This study aims to identify the types of traffic conflicts, evaluate the level of traffic safety based on the Time to Accident (TA) value, and provide recommendations for improving safety at the four-legged intersection of Mayjen Yusuf Singedekane Road, Keramasan, Palembang City. The results indicate that the intersection has a capacity of 6,487 passenger car units per hour (pcu/h), with a traffic volume of 2,561 pcu/h and a degree of saturation (DS) of 0.40. These results suggest that the intersection is still operating satisfactorily, as the DS value is below the acceptable threshold of 0.85. However, the traffic conflict analysis identified a total of 5,001 conflicts during the three-day observation period, consisting of 1,983 crossing conflicts, 1,371 merging conflicts, 1,197 diverging conflicts, and 422 weaving conflicts. The Time to Accident (TA) analysis showed that most conflicts had TA values of less than one second, indicating that they were classified as serious conflicts and reflecting a high potential for traffic accidents at the study location. Therefore, it can be concluded that although the intersection is still capable of accommodating the existing traffic demand, traffic safety requires further improvement through enhanced traffic signs and pavement markings, better regulation of vehicle movements, and increased road user discipline to reduce traffic conflicts and accident risks.

Keywords: Unsignalized Intersection, Traffic Conflict Technique (TCT), Time to Accident (TA), Saturation Degree, Traffic Safety.