

ABSTRACT

A traffic accident is an incident on unexpected and accidental road involving a vehicle or other road user. Traffic accidents can be caused by human factors, vehicles and road elements and the environment. One of the locations with high accident rates is Yogyakarta-Bantul road section. This study aims to examine more deeply about accident rates and the location of black spots on Yogyakarta-Bantul road section.

This research was conducted by analyze the number of accidents based on accident rates, vehicles involved, time of accident, age of the perpetrator, gender and type of work. Meanwhile, determined the location of the black spot using the Number Equivalent Accident (AEK) and Upper Control Limit (BKA) method. The data used in this research were obtained from direct observations in the field and several government agencies such as data on traffic accidents, traffic volume, and conditions of the International Roughness Index (IRI) of Yogyakarta-Bantul road.

Based on the analysis, the location of the black spot in the Yogyakarta-Bantul road was obtained at 4-5 km, 7.5-8 km, and 9.5-10.3 km, with the highest accident value being at 4-5 km. The 303 accidents that occurred on the Yogyakarta-Bantul road in 2014 to 2017, the highest accident occurred in motorbike riders during the daytime at 12.01-18.00 with the majority of the accident being 41-60 years and male. Chi Square test results state that there is no correlation between road conditions based on International Roughness Index values and the number of accidents that occur. The biggest accident occurs on roads that have good roughness conditions. The biggest factor that caused the accident at the location of the black-spot in Yogyakarta-Bantul street is human factors, such as behavior against direction, behavior ahead of other vehicles, and driving vehicles at high speed.

Keywords : accidents, accident rates, black spots, accident factors