



THE INFLUENCE OF VEHICLES SPEED ON ACCIDENT RATES AND THEIR CONSEQUENCES

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Abstract. The purpose of this article is to identify the influence of vehicles speed on accident rates and their consequences. In general the desired speed depends on several factors such as speed limits, vehicle type, traffic density, road environment, road geometry, time, and driving experience. From traffic engineering point of view a drivers' desired speed is the speed, which drivers usually want to maintain in different traffic situations, but it's very important to create a safe environment for all participants of traffic. When traffic is heavy most drivers are in a platoon and the traffic situation is such that some drivers attempt to overtake the leading vehicle or adjust their speed to the vehicle in front. Drivers cannot achieve the desired speed during peak hours. During peak hours urban freeways usually have severe traffic congestion. The random variation of traffic also contributes to the fact that it is not always possible to maintain the speed which a driver desires.

Keywords: road traffic safety, accidents, speed, urban area, roads, factors.

1. Introduction

Each country sets its own speed limits, however rates are similar. In most European countries speed limit is 50 km/h, in some – up to 60 km/h, in the country-side 70 to 113 km/h, on motorways – 80 to 130 km/h, except for the German motorways, where speed limit is of recommendation character. In the European countries speed limits are selected according to the country's accident rate and state politicians attitude to traffic safety problems. In the western states cities and settlements speed limit is 50 km/h, as the city has especially great danger to the pedestrians and bikers. As the speed increases danger for that group increases too. New wording of the Lithuanian traffic regulations fixes the speed limit of 50 km/h in cities and settlements. General speed limits in the European states are given in Table 1.

Speed on Lithuanian roads is additionally limited in order to assure safe traffic, because of emergency places or dangerous sections of the road as well as in places where pedestrians walk. Speed limits are intended to decrease accident rate, to facilitate their consequences and to decrease transport costs.

Vehicle speed [1] is limited taking into account:

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Table 1. General speed limits on European roads by vehicle category in km/h urban areas (GV) rural roads (MK) motorways (AM)

Country	Vehicles			Trucks		
	GV	MK	AM	GV	MK	AM
Austria	50	-	130	50	70	80
Belgium	50	90/120	120	50	90	90
Denmark	50	80	110	50	80	70
Finland	50	100	80/100/120	50	80	80
France	50	50/100/110	50/110/130	50	50/80	50/90
Germany	50	100	Reco- mended	50	80	80
Greece	50	110	120	50	80	80
Italy	50	90	130	50	70	80
Netherlands	50	100	120	50	80	80
Portugal	50	100/90	110/120	50	80	90
Spain	50	100	120	50	80	90
Sweden	50	90/110	90/110	50	90	90
G. Britain	48	-	113	48	-	96
Czech	60	90	130	50	80	80
Hungary	50	100	120	50	70	80
Latvia	50	-	-	50	-	-
Lithuania	50	90	110/130	50	70	90
Norway	50	80/90	90	50	80	80
Poland	60	90	110	50	70	70
Romania	60	80	80	40	50	50
Slovakia	60	90	130	60	90	80
Switzerland	50	100	120	50	80	100

Source: ECMT 2002 m.