

IDENTIFICATION OF OVERLOADED HEAVY GOODS VEHICLES USING VEHICLE SPEEDS ON UPHILLS

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ABSTRACT

Heavy Goods Vehicles (HGV) axle loads consist the most critical parameters in pavement dimension computation. Even more, overloaded HGV comprises an important parameter of adverse loading on pavement and road infrastructure.

Extensive studies concerning the presence of overloaded HGV in the main Greek road network revealed the presence of considerable number of overloaded vehicles (up to 30% of the total HGV flow). It becomes clear that more effort is required to control and minimize the number of overloaded HGV using simplifying methods in terms of time needed, personnel and total control and enforcement cost.

The paper describes an attempt to relate HGV speeds on uphill with HGV total excessive loads providing thus a useful and simple means to identify possibly overloaded HGV which could then be driven to a weight control station for further inspection. In addition to that it is shown that simple speed measurements allow a rough estimation of the overloaded HGV presence. The analysis performed is based on speed and weight data collected at a particular site of the Egnatia Odos-westbound.

KEY WORDS: Heavy Good Vehicles (HGV), vehicle speed, overloaded HGV, pavement road maintenance