

OVERLOADED VEHICLE IMPLICATIONS ON ROAD AND BRIDGE MAINTENANCE

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ABSTRACT

Overloaded heavy good vehicles (HGV) comprise an important parameter of adverse loading on pavements and road infrastructure. Potential consequences to the safety factors and operation life should be checked.

Egnatia Odos SA (EOAE) has conducted relevant traffic and weight counts in the past. Those results along with recent observations on traffic behaviour of HGV are used to estimate the amount of the additional damage overloaded HGV cause to pavements and bridges. HGV traffic behaviour and counts have been conducted along bridges of a specific type at a specific Egnatia section, where speeds are relevantly low. The results derived, pointed that, even for the most overloaded HGV bending moments and shear capacity at bridges are quite lower than the load type 60/30, according to which bridges have been designed. At the same time the inventory and operating ratings of these bridges according to AASHTO, are in the order of 1,30 and 1,50, respectively. Thus, assuming that proper bridge maintenance exists, so that strength decrement due to ageing and wear is under control, overloaded HGV are not a potential danger to Egnatia Odos (EO) bridges.

On the other hand, overloaded HGV represent an important wear factor for road pavements. The additional damage attributed to them amounts to an extra 35%.

KEYWORDS: Road maintenance, bridge maintenance, Overweight heavy good vehicles