CONVERSION OF TRAFFIC VOLUME OF ALL GREEK ROAD NETWORK INTO STANDARD AXLE LOADS

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ABSTRACT

In most pavement design methods the use of Equivalent Standard Axial Loads (ESAL) is a fundamental parameter. For its determination, it must be known the number and the magnitude of the axle loads, as well as the load equivalency factors between standard axle load and vehicle axle load. Few countries went even further and they have determined equivalency factors per commercial vehicle category. The later makes traffic surveys and determination of total number of ESAL much easier.

This paper determines equivalency factors per vehicle category under the traffic conditions existing in the Greek road network. It also determines the average annual traffic increase. With the help of the equivalency factors determined, the 1985's daily traffic load of all national roads, registered in vehicles by the Ministry of Public Works, has been converted to daily equivalent standard axles, and a new traffic map in ESAL for 1995 is been proposed. Additionally, the traffic composition in all roads have been divided into five general categories from which the equivalency factors per traffic composition category are derived. All the above is a very useful tool to the highway engineer who wants to determine the total number of ESAL, for his pavement design calculations, but does not have the facility and the required time to carry out analytical traffic surveys.