Alizé-Lcpc Aéronautique, a New Software for the Rational Design of Airport Pavement

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Abstract

Alizé-Lcpc is the reference software for roads and motorways pavement design in France since more than thirty years. The French pavement design has been developed initially by the national road authorities, but many other road owners in France, as in many other countries, now follow this approach. It is a rational method, based on calculating the resilient stresses and strains in roadways by the multi-layer elastic linear classical model (Burmister). The design is carried out by comparing the calculated stresses and/or strains in all the layers, to the admissible stresses and/or strains. These values are evaluated according to the fatigue characteristics of the materials (bounded materials) or their rutting behavior (untreated materials and soils), taking into account the cumulative traffic specified for the pavement.

The potential interest of the rational approach applied to airport pavement is indisputable. Several aviation authorities have already initiated this evolution. In France, the adaptation of the road design approach to airport pavement is now in progress, leading to the development of a specific version of Alizé-Lcpc sofware dedicated to the design of airport both flexible and rigid pavements.

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