

Airfield Pavements Made of Reinforced Concrete: Dimensioning According to the Theory of Limit States and Eurocode

Authors : M. Linek, P. Nita

Abstract : In the previous airfield construction industry, pavements made of reinforced concrete have been used very rarely; however, the necessity to use this type of pavements in an emergency situations justifies the need reference to this issue. The paper concerns the problem of airfield pavement dimensioning made of reinforced concrete and the evaluation of selected dimensioning methods of reinforced concrete slabs intended for airfield pavements. Analysis of slabs dimensioning, according to classical method of limit states has been performed and it has been compared to results obtained in case of methods complying with Eurocode 2 guidelines. Basis of an analysis was a concrete slab of class C35/45 with reinforcement, located in tension zone. Steel bars of 16.0 mm have been used as slab reinforcement. According to comparative analysis of obtained results, conclusions were reached regarding application legitimacy of the discussed methods and their design advantages.

Keywords : reinforced concrete, cement concrete, airport pavements, dimensioning

Conference Title : ICSSE 2016 : International Conference on Surface Science and Engineering

Conference Location : Venice, Italy

Conference Dates : August 08-09, 2016