

Utilization of Multi-Criteria Evaluation in Forensic Engineering and the Expertise outside Wall Subsystem

Authors : Tomas Barnak, Libor Matejka

Abstract : The aim of this study is to create a standard application using multi-criteria evaluation in the field of forensic engineering. This situation can occur in the professional assessment in several cases such as when it is necessary to consider more criteria variant of the structural subsystems, more variants according to several criteria based on a court claim, which requires expert advice. A problematic situation arises when it is necessary to clearly determine the ranking of the options according to established criteria, and reduce subjective evaluation. For the procurement in the field of construction which is based on the prepared text of the law not only economic criteria but also technical, technological and environmental criteria will be determined. This fact substantially changes the style of evaluation of individual bids. For the above-mentioned needs of procurement, the unification of expert's decisions and the use of multi-criteria assessment seem to be a reasonable option. In the case of experimental verification when using multi-criteria evaluation of alternatives construction subsystem the economic, technical, technological and environmental criteria will be compared. The core of the solution is to compare a selected number of set criteria, application methods and evaluation weighting based on the weighted values assigned to each of the criteria to use multi-criteria evaluation methods. The sequence of individual variations is determined by the evaluation of the importance of the values of corresponding criteria concerning expertise in the problematic of outside wall constructional subsystems.

Keywords : criteria, expertise, multi-criteria evaluation, outside wall subsystems

Conference Title : ICFEM 2016 : International Conference on Forensic Engineering and Management

Conference Location : Amsterdam, Netherlands

Conference Dates : August 04-05, 2016