

Research on construction engineering safety Risk Control based on IAHP-TOPSIS

Minggang DU¹ and Tongyin HAN²

¹Shijiazhuang Tiedao University

²Langfang Shi Fan Xue Yuan

February 8, 2021

Abstract

Based on the improved analytic hierarchy process (IAHP) and TOPSIS method to build the construction project safety evaluation index system used to evaluate the safety management of construction projects in the construction stage, so as to control the safety risk of the project, prevent the occurrence of safety accidents, and improve the level of safety management. Through make a statistical analysis of the recent safety accidents in construction projects in China, comprehensively consider the four aspects of human, object, environment and management, establish 12 evaluation indexes of construction project safety management. Through improved analytic hierarchy process (AHP) to determine evaluation index weights vector, combined with the ideal solutions for sorting method, put forward a IAHP method and TOPSIS method based on the safety evaluation model. The research results show that the model can accurately show the deficiencies of the safety management of the evaluation object, and directly reflect the safety management level of the evaluation object. The research conclusion is consistent with the actual situation of the project, which can provide guidance for the improvement of safety redundancy and safety risk control of construction engineering.

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DU Minggang¹, HAN Tongyin²

(1.School of Civil Engineering, Shijiazhuang Tiedao University, Shijiazhuang 050043, China; 2.Langfang Normal University, Langfang 065000, China)

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