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Heavy equipment utilization, related risks on construction sites of Turkey: A field study on risk perception of operators

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The rate of the fatal accidents caused by construction equipments are %8,6 and ranks 4 in the Turkish construction industry. However the studies are very few on heavy equipment cases. The study ascertains the perception of the workers about the risks of the construction equipments by means of studying the qualifications of precautions regarding health and safety taken in accordance with the project types and the construction periods of the projects. The study is based on that the questionnaire survey performed in 51 construction projects. Besides, the accidents due to the construction equipments in Turkey are shown, classified and their causes are analyzed. Although the construction projects lasting less than 3 years are identified as small projects, their share in total are 74%. Approximately 60% of these projects is still in rough construction period. The commonly used equipments in this stage are concrete mixers (15%), concrete pumps (15%), tower cranes (14.2%) and excavators (10.2%). It is seen that only 29.4 % of the operators surveyed have H&S training. The most interesting result is that none of the respondents were witness of a construction equipment accident. The study and future research on analysis of the heavy equipment accidents will increase awareness towards those accidents and prevention methods that mitigate risk of the construction equipments and pave the way for the new research. Moreover, it is possible to decrease the number of the accidents by improvement of risk perceptions of the operators and co-operators.

Biography

G. Emre Gurcanli has completed his Ph.D in 2006 in Technical University of Istanbul Civil Engineering Faculty. After his doctoral dissertation, he started as a lecturer and then took the title of Assoc.Prof. on Construction Management. Now, he is working at the same faculty. He has also been working as an expert witness in criminal and labour courts for ten years on occupational and traffic accidents. His research and consultation interests are construction safety, traffic safety, multivariate statistical analysis, construction law, contract administration, construction management, fuzzy logic.

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