

عنوان مقاله:

Identification and Safety Assessment of the Hazardous Zones (unwanted energy flows) in An Construction Project at the National Petrochemical Company by Application of ET&BA Method

محل انتشار:

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خلاصه مقاله:

In this study, the safety assessment has been conducted qualitatively with the goal of determining the potential existing hazards in construction sites, with the application of ET&BA technique and assessment of the identified risks. In other words, in order to determine the risk factor, the possibilities of conversion of potential hazards into accidents and the risk factor standards were classified qualitatively. For this purpose, the risk matrix presented in MIL-STD-882E standard (The 5th Version of U.S. Military Standard) was used. According to the results of this study, a total of 144 hazardous zones were identified. Based on the MIL-STD-882E Standard, 68% of the cases were in the high-risk zone, 30% were in the important risk zone and 2% were in the average risk zone. Meanwhile, working on scaffoldings has had the most number of high risks (23 cases) and the other sections including excavation, electrical, welding and Cutting operations are placed in the next level of importance with respectively 21, 13 and 11 high-risk cases. With due to the results, nearly the majority of identified points are in the high-risk zone (68%), and important zone (30%), which is unacceptable according to the MIL-STD-822E . Hence, the necessity of conducting appropriate controlling measures including the establishment of supervision and inspection systems, preventive repairing, and applying standard and safe techniques and methods are some of the proposals which leads to a drop in the possible risks. By comparing the results of this research with other similar projects, including the study which was conducted by the Ugandan Employment Office in 2005, one can realize similar results in developing countries, especially regarding high risks and control-related priorities.

کلمات کلیدی:

Construction, ET & BA, Risk Assessment and Accidents

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