Identification and prioritizing of the Safety and Health risks in Dam construction projects with FMEA

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Abstract

The prevalence and incidence of occupational accidents is always one of the most important issues in the construction projects and manufacturing industries. Regard to the history of numerous environmental, safety and health problems that occurring during the construction of dams, identifying and evaluating safety, health and environmental risks in these projects have great importance. Therefore, the present study was designed and executed to ranking the available risks by using FMEA technique. This study is applied in terms of purpose and descriptive-analytical in terms of data collection.

The statistical population of this study was all supervisors of Executive units of the Chamshir Dam and Power Plant which is located in the Gachsaran city. The data gathering tool of this study was a checklist for gathering information on probable and information risks such as severity, occurrence and diagnosis of each risk that was distributed among the heads of units through census method. After compilation and classification, the data were analyzed by FMEA method. 75 cases of risk were identified.

Risks such as falling and colliding stones from picking or throwing on the machine cabin and people, hoppers crash on the workers, crashing framework, crane overturning, breaking down timber, breaking handrail and stiffener, Armature network and equipment deal with bare cables, falling loads, strapping, biting personnel by scorpion and snake, explosion of acetylene and gas cylinders, machinery crashes, falling from height and explosive materials used to block prime were risk priorities or critical risk (15-15000).

The results showed that the implementation of FMEA technique could identify and rank the risks in the construction project and prevent accidents by training and observing safety tips stiffener.

Keywords: Risk Identification, Safety and Health, Dam, FMEA