HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM (HSE-MS) DURING HEAVY CONSTRUCTION FOR RISK AND LIABILITY REDUCTION BY INSURANCE COVERAGE METHOD.

Health, Safety, Environment, and Quality assurance (HSE-Q) is very pivotal in all phases of a project regardless of the project's size or type. However, it becomes even more important if a project is either strategic or it has significant economic dimensions. HSE-Q Management System is the management system of choice in all of the huge and successful fortune 500 corporations of the world. It basically governs every single project of these corporations from the point of inception to the decommissioning phase. It is in the framework of this strategic management system which the sustainable development of a corporation and its losses due to undesired liabilities can be planned, managed and controlled. This is a very wide multidisciplinary tool of interdisciplinary subjects applicable to a very wide field of activities. Each subject will require its own detailed study and analysis. The focal point of this paper, however deals with construction phase in large construction projects, marine and offshore structures or dam construction on rivers. These projects absorb huge amount of investments and human resources, and are always faced with various types of risks; which lead to loss or damage. Risk analysis assists us to evaluate the needs for safety improvement, selecting and prioritizing remedial and corrective actions, and improving the construction quality procedure. This research deals with identification of transferable risks to insurance companies while the construction is ongoing. For this purpose, the major risks during the construction of offshore structures and dams have been studied from two different aspects, one with regard to the type of structure and second with regard to different constructional and operational components of the structure. Then, the current major risks have been reviewed apart from their types during the construction, which have been reviewed. Since the insurance is one of the risk transferring methods which is a recommended response to identified risks, the various types of risks which are transferable to insurance companies have been discussed. Also, some of the exclusions in the insurance coverage have been introduced. Finally, by comparing the identified major risks during the construction and current insurance engineering practice in the world, transferable risks which could be covered with insurances are categorized. Awareness of insurance definition methods, terms and
conditions enables the contractors to transfer some risks to insurance companies and strengthen themselves in acceptance and mitigation of residual risks. Introduction of insurance coverage of risks will satisfy HSE-MS requirements and inline with risk premium reduction will satisfy more safety criteria for the project.

کلمات کلیدی:
Hydraulic structure, Risk, Engineering insurances, offshore structures, water barrier, HSE-MS, premium

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