

USING AHP TO EVALUATE THE PERFORMANCE OF THE QUALITY, ENVIRONMENT, OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEMS

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ABSTRACT

The paper analyses the application of the AHP method together with the attach A of ISO 9004:2000 in order to evaluate the performance of two industrial organizations, both possessing quality management systems with ISO 9001:2000 certifications, based on the specific requirements of quality, environment, occupational health and management systems. The evaluated organizations were a government-owned company from the science and technology sector that works in the nuclear area, and a private company that works in the automotive and railroad area. The open software Web-Hipre version 1.22 from Helsinki University of Technology, Finland, was used. By means of the sensibility analysis, it was possible to conclude that for the government-owned company, the most important criterion/requirement was related to product manufacturing with an index of 0.20, and the most important subcriterion was related to production operations with an index of 0.048, which represents the reality of the company. If the criterion/requirement index were increased by 0.03, the most important subcriterion would be project and development. For the private company, the most important criterion/requirement was the management system with an index of 0.31, and its most important subcriterion was document control with an index of 0.136, which also represents the reality of the company. If the criterion/requirement index were decreased by 0.13, the most important subcriteria would be suppliers and partners. The results demonstrated that the AHP is adequate to evaluate organizational performances. Both organizations presented similar performance levels.

Key Words: AHP, performance analysis, quality, environment, health management system