

# APPLICATION OF ANALYTIC HIERARCHY PROCESS (AHP) TO PRIORITIZE CAUSES OF CLAIMS BASED ON THE EFFECT ON THE TIME AND COSTS OF INFRASTRUCTURAL PROJECTS IN THE FIELD OF IRAN OIL AND GAS

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## ABSTRACT

As the approaches and implementation process of the projects are becoming more and more complicated, the possibility of encountering events that causes argument and claim among project beneficiaries increase. Nowadays, claims have become an indispensable part of the management projects. Since claims have pronounced effects on the project implementation and may raise question the project justification, the need for claims management is evident.

The first step in the optimization of claims management is to identify the causes of claims. However, in order to determine the most important ones, other claim management techniques including identifying, pursuing and solving the claims are required. For this purpose, the claims causing difficulties in the projects should be prioritized according to the different types of claims (time and cost claims). As such, Analytic Hierarchy Process (AHP) has been employed in this study. Therefore, pairwise comparison of these causes have been conducted based on their importance in the time and cost claims. Also comparison of the importance of time and cost has investigated in the industry for the purpose of determining the most important causes as well as its importance rate.

Since the importance of claim causes may vary from one project to another according to the changes of the importance of time and cost, sensitivity analysis have been implemented on the prioritizing. Sensitivity analysis identifies the critical claim causes in different projects (with different weights for time and cost claims) and prevents spending time and energy on low important issues.

Keywords: AHP, Claims Management, Time claim, Cost claim, Sensitivity Analysis.

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