



Risk Analysis and Management in Railway Project using Tunnel Design: A Literature Review

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ABSTRACT

Population growth makes public transportation needs increase, one of the needs for the availability of population growth is the need for availability of railway. However, the available land for railway construction is very limited, therefore experts design the railway using a tunnel. Risk analysis in Railway projects with tunnel design is carried out to determine the most important type of risks. The results of this research show that the railway project with tunnel design has the same risks as railway projects with other designs, there are site risk and environmental risk. After finding the most important risk, use the Multiphase risk management method to manage this risk.

Keywords:

Railway project, Tunnel construction, Railway risk factor, Risk Management.

1. Introduction

Risk management is an important impact on the organization. There is a strong link between the amount of risk management and the level of success of the project. Proper risk management implies the control of possible future events and thus it is a measure of security to the contractors who take the projects and to the owners of the projects. Risk management may be described as "a specific process of risk and consciously determining how each should be treated." "It is a management tool that identifies sources of risk and uncertainty, determines their impact, and develops appropriate management responses." A systematic process of risk management has been divided into risk classification, risk identification, risk analysis, and risk response, where risk response has been further divided into four actions, i.e. retention, reduction, transfer, and avoidance.