Analysis Mechanized Boring (TBM) of Tehran Subway Line 7

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Abstract : Tunnel boring machines (TBMs) have been used for the construction of various tunnels for mining projects for the purpose of access, conveyance of ore and waste, drainage, exploration, water supply and water diversion. Several mining projects have seen the successful and economic beneficial use of TBMs, and there is an increasing awareness of the benefits of TBMs for mining projects. Key technical considerations for the use of TBMs for the construction of tunnels for mining projects include geological issues (rock type, rock alteration, rock strength, rock abrasivity, durability, ground water inflows), depth of cover and the potential for overstressing/rockbursts, site access and terrain, portal locations, TBM constraints, minimum tunnel size, tunnel support requirements, contractor and labor experience, and project schedule demands. This study focuses on tunnelling mining, with the goal to develop methods and tools to be used to gain understanding of these processes, and to analyze metro of Tehran. The Metro Line 7 of Tehran is one of the Longest (26 Km) and deepest (27m) of projects that's under implementation. Because of major differences like passing under all geotechnical layers of the town and encountering part of it with underground water table and also using mechanized excavation system, is one of special metro projects.

Keywords : TBM, tunnel boring machines economic, metro, line 7
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