

A Swellex Application in Ground Reinforcement Project of the Ancient St. Pierre Church

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Abstract

St. Pierre was the one of the six apostles who first believed to Jesus Christ. St. Pierre converted a cave to be a church located in Hatay city of Turkey. St. Pierre church is one of the oldest churches that have been built in early years of Christianity. The church stands under a cliff, so there were some rock falling issues. A project to renovate the church was prepared and rock reinforcement types were suggested by experts from Middle East Technical University. This article focuses on the Swellex type friction rock bolt application for rock reinforcement in the St. Pierre church project. Rehabilitation of rock mass has been carried out dropping some small rock blocks to secure the area. Then, rock reinforcement using the rock bolts was performed. The swellex type friction bolts have been applied on the edge of the cliffs. Applications consisting of three main stages of drilling, mounting and swelling were done by professional squad of Kuzey Industrial Mountaineering and Atlas Copco. In the application, special coated Swellex rock bolts with lengths of 3.0 m and 3.6 m were used.

Key words: Swellex friction bolts, St. Pierre church, Rock support, Slope stability, Ancient site preservation