

Tunnel wall and arch renovation with S&P ARMO-crete d and S&P ARMO-mesh 200/200

Project: The Tal tunnel in Herisau, Switzerland

Year: 2011

Background: Due to long-term strain on the construction, the Tal tunnel was in need of renovation. In the process, the tunnel walls and arched ceiling were simultaneously renovated and reinforced with the S&P ARMO system. This was the most economical solution that would satisfy the requirements regarding the clearance gauge of modern rolling stock.

Solution: The concrete substrate was cleaned and in damaged places grinded down using high pressure water jets. The first layer of ARMO-crete d with a thickness of 4 cm was then applied. In the next work stage, the S&P ARMO-mesh 200/200 was fixed onto the shotcrete using rust-free staples and a pneumatic staple gun. The reinforcement mesh was finally covered with another 4 cm-thick layer of S&P ARMO-crete d.

Tests: Materials and methods were inspected closely through various tests on the structure itself and in the laboratory.

Material consumption: approx. 200 tons of S&P ARMO-crete d and 1600 m² S&P ARMO-mesh 200/200

Timeframe: 2 months in total

Images: *a) Applying the first layer of ARMO-crete d*
b) Mounting the ARMO-mesh 200/200 onto the shotcrete
c) Tunnel after the completion of the renovation and reinforcement measures

a)



b)



c)

