

ŞANLIURFA - GÜNEY BATI ROAD PROJECT

ŞANLIURFA, GÜNEYDOĞU ANADOLU, TURKEY

Surface Strengthening and Support

Problem

Rockfall risks have been monitored on several slopes of the Sanliurfa - Guneybati Road which are endangering the safety of the traffic. During a site visit of our technical department, it was determined that the main stratigraphy consists of limestone and that the volume of the loosened, potentially falling rock material estimates between 0.25-0.3 m³. In some areas, the slope has been shaped into 3 to 4 steps with a overall inclination of 1Y/3D and an overall height of approx. 45 m. As a result of the slopes geometry and the high quantity of potentially unstable rock material, the safety of the road could not be guaranteed without a protection system.

Solution

As a consequence of the above mentioned situation, it was found necessary to protect the slope with a double-twisted wire mesh in a simple drapery system. In the case of rock fall, the energy of the rocks will be decreased and the falling rock material will be guided to the ground without further threatening the traffic on the road.

Taking the height and inclination of the slope, the rock volume and the establishing energy of a falling rock into account, the utilization of a double-twisted wire mesh fabricated by 2.7mm, galvanized steel wire with a 8x10 mesh size. As the system has been designed as a simple drapery system, surface anchorages were installed at 25 - 30 m² per anchor only with the aim to slightly fix the mesh onto the slope surface.

The total protection area was measured with 221.200 m². The project implementation started on 14.10.2014 and was successfully finished on 28.05.2015.

Client: KARAYOLLARI 9. BÖLGE MÜDÜRLÜĞÜ

Designer / Consultant: MACCAFERRI TURKEY

Contractor: TOPALAN İNŞAAT SAN. TİC. LTD. ŞTİ.

Products used (Qty.)

- DT Mesh 221.200 m²

Date of construction: 10/2014 - 05/2015



Rockfall Protection at the Sanliurfa Guneybati Road Project



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Rockfall Protection Design Drawings