



KORDÁRNA

A MEMBER OF THE KORD GROUP

REINFORCED EARTH STRUCTURES



Prácheň – Nový Bor

reconstruction of unstable soil at road I/13 in

country: Czech Republic

realization: 1998

material: Armatex® G 55/55

600 m²

Kortex® GT 600/50

150 m²



ARMATEX® G

woven geogrid from high-strength PET with PVC adjustment for soil reinforcement

purpose of usage:

to reinforce the sheer slope

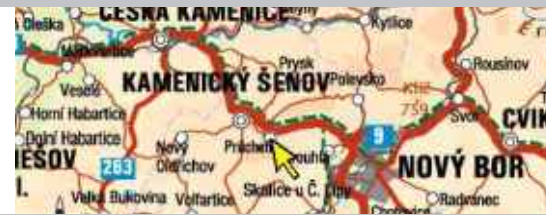


KORTEX® GT

woven geotextile from high-strength PET for soil reinforcement, separation and filtration

purpose of usage:

to reinforce the foundation



In November 1998, following a heavy rainfall, the road I/13 in the section Prácheň - Nový Bor (see fig. 1 and 2) was damaged. In the given section the road is routed in a rock off-cut. Landslide of the road embankment damaged one half of the way and traffic had to be rerouted to one lane only for both directions, excluding vehicles over 6 tonnes. This fact, however, was not much respected and the risk of other damage was imminent. On this reason the reconstruction had to be undertaken in spite of winter. Considering inconvenient conditions in winter for laying concrete, SG Geotechnika proposed to retain the landslide by using combined effects of reinforced soil and gabions, i.e. not using wet processes.

Following excavation of the slipped earth at the toe of the slope down to the original subgrade, the base course was laid reinforcing polyester geotextile **Kortex® GT**, lengthwise direction strength 600 kN/m and 50 kN/m in crosswise direction. The geotextile has a main strength in lengthwise direction to compensate settlement differences as a result of changeable compactibility of subgrade. The toe of the slope is secured by gabion mattresses and the embankment above gabion (steep 1:1) is reinforced by layer thickness of 0.6 m by the **Armatex® G 55/55** geogrid.

Despite difficult process of work during winter and with the road under full traffic, the slope was repaired with due quality and its esthetic appearance is agreeable, with minimum impairment to surrounding vegetation, as can be seen in fig. 4 and 5. Scheme of the design is displayed in fig. 3, fig. 2 View of the landslide of the road from the accumulation area.



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Fig. 1 Road after slide (11/98)



Fig. 2 View of slide of road from storage area

PRÁCHEŇ – slide road I/13 km 162 – 163

SG – Geotechnika, a. s.

CROSS SECTION

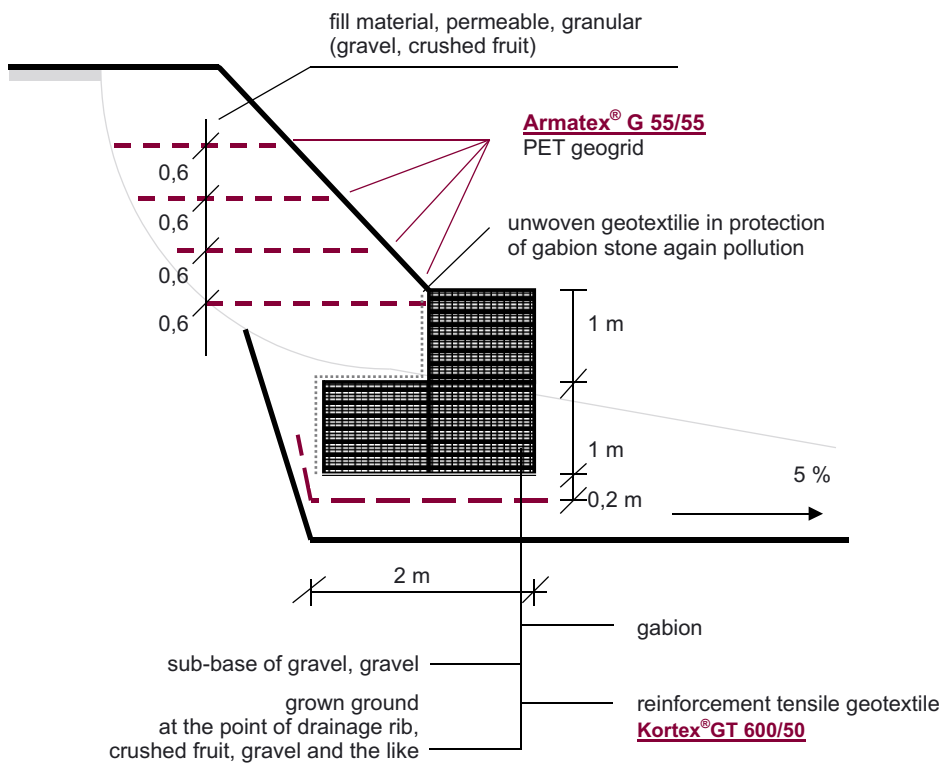


Fig. 3 Diagram provision of slide



Fig. 4 Slope after maintenance



Fig. 5 Slope after maintenance

investor:
Ředitelství silnic a dálnic, Liberec

designer:
Vaner, s.r.o. Liberec

judgement:
SG-GEOTECHNIKA a.s., Praha

contractor:
Silnice a mosty, a.s. Česká Lípa

realization:
1998