

New drainage tunnel of the tunnel Višňové – design and excavation

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Abstract. The actual pilot tunnel dated to the period of geological and hydrogeological survey, is designed as a part of the tunnel Višňové, which is located at the section of the D1 motorway Lietavská Lúčka – Višňové – Dubná Skala in Slovakia. Drainage tunnel will be used for the drainage of the main tunnel tubes, where the maximum inflow from the eastern portal is greater than 250 l.s^{-1} . Overlapping of the initial pilot tunnel with the profile of the southern tunnel tube led to the demolition of the portal sections of the pilot tunnel during the excavation of main tunnel tubes. These sections were replaced by new drainage tunnels, with the lengths of 288.0 meters from west portal and 538.0 meters from eastern portal, to ensure access from both portals. The new drainage tunnel is excavated under the level of the two main tunnel tubes. Drainage pipes with a diameter of 250 mm will be installed from cleaning niches in the main tunnel tubes to the new drainage tunnel.