

ACO Surface Water Management

Tunnel Projects E763, 2015-2016



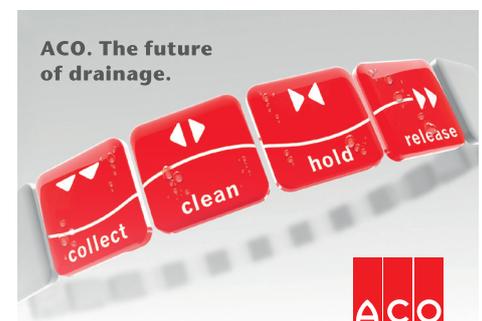
ACO Professional Tunnel Drainage Solutions ACO Serbia Tunnels Projects

Tunnel Šarani E763

Serbia is among rare countries in Europe where the wave of investments in infrastructure projects, such as highways, tunnels and bridges is at its peak. Three new lines of highways are in construction phase: E80 Niš – Bulgarian Border 86 km, E75 Leskovac – Macedonian Border 108.7 km and E763 towards the border with Montenegro 52.86 km. Infrastructure projects in Serbia have started with design phase in 2008. ACO Serbia has been in intensive contact with two design companies who were in charge of tunnel projects on all highway sections, The Serbian Road Institute and The Serbian Institute of Transportation. This cooperation, which started back in 2008, resulted in first tunnel projects in Serbia with professional tunnel drainage solution. Specially designed channel profile with required capacity for hazardous liquids and sump units with custom made design to fit the specific tunnel profile, were specified in M0 fire resistant requirements. Alongside drainage, ACO developed a special system for separation and treatment of hazardous liquids from the tunnel. This system is based on a combination of light oil concrete separators, sludge traps and valve shafts which close the flow of liquids automatically

by use of ACO Securart alarm device in case of incident and direct the liquids into the sludge traps where they remain until removal and cleaning. The design phase is of importance in infrastructure projects. Knowledge and support which ACO provided in the circumstances of unclear norms and regulations, was extremely helpful to the designers. The directions stated in RABT and European Directive 2004/54/EC on Minimum Safety Requirements for tunnels in the trans-European road network, were the base for designing all the tunnel projects in Serbia. However, since the design phase, these projects have been delayed for construction until 2014. Then started the phase of coordination with construction companies and supervisors, to defend and argument the designed solution. As it is usually the case with large projects, costs of materials are being revised a lot of times, in order to find economically more suitable solutions which comply with project requirements. ACO solution, as the only one fulfilling all the technical requirements in terms of hydraulics, fire resistance and water tightness, was finally accepted and delivered for three

tunnels in 2015 in overall length of cca. 3000m of professional ACO tunnel channels produced in ACO Switzerland. ACO was also very present during the installation phase as a support to the construction companies. Due to specific installation process for concrete pavement inside the tunnels, ACO had to come up with special tools for placing and installation of sump units and pipe connections. Good collaboration with all the participants on these projects has resulted with modern, state of the art tunnels which are fully in compliance with European norms and regulations. Safety and functionality, as number one features of tunnel projects are fulfilled completely, setting the trends in drainage for the upcoming tunnels projects in Serbia.





ACO Tunnel Channel Type 4



ACO sump unit type „Progon“



ACO hazardous liquids treatment system

Reference at a glance

Project: E763 Tunels Šarani, Brđani and Savinac

Investor: Corridors of Serbia

Designer: Serbian Road Institute and Serbian Transportation Institute

Main Contractor: Azvirt LLC

Subcontractors: Energoprojekt Niskogradnja and Planum AD

Year of construction: 2015, 2016

ACO Products:

3000 m ACO Tunnel channel professional solution Type 4 with custom made sump unit type Progon

5 pcs Light Oil Separator ACO Oleopator NS 6 SF 1200

2 pcs ACO valve shaft with automatics

ACO

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