

**Case study: Breska Bridge, SIKA****Project Description**

Breska Bridge, located near Novi Sad, Serbia, is the longest bridge over Danube river at all. Built in 1975 as a pre-stressed concrete bridge. In April 1999 she was bombed two times during the operation Allied Forces. It could be managed to stabilise the bridge provisionally as she is an important part of the Europa Route E75. In 2011 the second bridge could be finalised and the maintenance of the first build bridge started. Finishing the works at the end of 2013 the two bridges provide now 3 lanes in each direction of the E 75..

**Project Requirements**

Due to the bad conditions of the bridge ingress of water started to attack the concrete. The existing epoxy resin based waterproofing system had to be replaced. A high performing spray applied polyurethane waterproofing system has been chosen for the refurbishment to ensure an extended life time of the old bridge and to reduce the maintenance works.

**Sika Solutions and Advantages**

Sika offered the fast curing, according the German standard ZTV-ING part 7 certified bridge deck waterproofing system. The systems consists of a solvent free epoxy primer, **Sikafloor®-161**, the spray applied, fast curing **Sikalastic®-821 LV** membrane and the tack coat to the asphalt overlay made of **Sikafloor®-161** broadcast with **Sikalastic®-827 LT** hot pelt pellets. This system is fully bonded to the concrete substrate and the asphalt overlay and provides excellent adhesion and shear strength. Due to project related reasons and the bankruptcy of the main contractor the waterproofing system had to be changed to a torched bituminous membrane when half of the surface was already waterproofed. As a solventfree epoxy primer underneath the torched membrane **Sika® Ergodur 500** has been applied.

**Sika products used:**

Primer and Levelling coat: **Sikafloor®-161 on 12.500m<sup>2</sup> + 4000m<sup>2</sup>** walk and sideways

Waterproofing Membrane: **Sikalastic®-821 LV on 12.500m<sup>2</sup> + 4000m<sup>2</sup>** walk and sideways

Tack Coat: **Sikafloor®-161** broadcasted with **Sikalastic-827 LT** pellets **on 12.500m<sup>2</sup>**

Epoxy Primer underneath torched bituminous membrane: **Sika® Ergodur 500 on 12.500m<sup>2</sup>**

Overlay: **Hot Rolled Asphalt**

Refurbishment and strengthening: **SikaCarbodur and SikaWarp**

**Project Participants**

Owner & Engineer: : Serbian Government

Main Contractor: Alpine/ Roads of Serbia

Specialist Applicator: Lever inzenjering, Serbia

Sika organization: Sika DOO Serbia

