

Reference

Repair of Fälmisbrücke, Muotathal (SZ)

Repair of guide walls (cantilevers)



Setting of the task

In the past, repaired guide walls of bridges (cantilevers) often showed many cracks right after finishing of the repair works. Some of these cracks even contained water. Regarding these cracks it has to be assumed that chlorides will be able to reach reinforcement and may cause corrosive damages. To react to this problem, a new concrete for a repair of cantilevers or similar building components has to be defined. Cracking should be reduced significantly and cracking diameters of more than 0.3 mm should be avoided reliably.

Solution and judgement

Together with the previously used standard concrete and two new defined concretes also Concretum® D-ZERO Plus was submitted to an extensive test program. The results showed that shrinkage can be reduced with Concretum® D-ZERO Plus up to 90% in comparison to the other concretes. After these tests one guide wall of the Fälmisbrücke in Muotathal was repaired with standard concrete and the other one with Concretum® D-ZERO Plus. Following this process, the solution (which has been evaluated by an external testing laboratory) could be compared directly with

Facts

Products:
D-ZERO Plus

Duration of the project:
May to July 2007

Building owner:
Tiefbauamt Kanton
Schwyz

Realization:
Locher AG Zürich

Concrete supplier:
Kibag AG (Minder)
Schindellegi



status quo. Contrary to the standard concrete that showed immediately after striking the first cracks, no cracks were found on the cantilever that was repaired with Concretum® D-ZERO Plus. Concretum® D-ZERO meets all demands on high-quality FT concrete (C30/37, XC4, XD3, XF4) and can be advertised according to SN EN 206-1.

