SIKA AT WORK

Structural Retrofitting of Krousovitis Bridge, Northern Greece

STRUCTURAL STRENGTHENING: SikaWrap® FX-50 C, SikaWrap®-300C
STRUCTURAL BONDING: Sikadur®-30, Sikadur®-52
PROTECTION: Sika® Ferrogard®-903+, Sikagard®-680 S, Sikagard®-704 S

BUILDING TRUST

STRUCTURAL RETROFITTING OF KROUSOVITIS BRIDGE







PROJECT DESCRIPTION

Krousovitis Bridge is located on the vertical axis A 25 Lagkada - Serres - Promachonas in Northern Greece. It is a four span simply opening supported bridge with a total length of approx. 120 m and width of 18.9m. Each opening consists of four simply supported prestressed beams connected together by transverse girders, supporting the bridge deck. The grouting of the pedestals is via elastometallic bearings to integral piers and piles.

PROJECT REQUIREMENTS

It was necessary to enhance the shear strength of the existing beams due to alterations in their cross-section dimensions. Additionally, extra load derived from the deck slab which was strengthened with reinforced concrete was expected.

SIKA ADDED VALUE

In cooperation with Sika a thorough Quality Control procedure was set covering in full attention the substrate condition and the application evaluation.

SIKA SOLUTION

Sika solution for the project comprises of a full range of repair and protection materials, including repair epoxy adhesives as the epoxy paste **Sikadur®-30**, structural injection with **Sikadur®-52**, anticorrosion protection with **Sika® Ferrogard®-903+**, protective acrylic coating **Sikagard®-680S**. The **SikaWrap®** strengthening system was selected in order to avoid extra weight on the beams and due to the fast application procedure that allowed opening to the traffic in a reduced period of time.

The additional shear strength was obtained by means of **SikaWrap®-300C**. The external wrapping of the beams allowed increasing the existing shear strength of the structural members in a fast and efficient way, minimizing the traffic disruption.

Due to the geometry of the cross-sections, additional anchorages based on **SikaWrap® FX-50C** CFRP cords were applied, providing supplementary anchorage capacity.

Additionally, **Sikagard®-680S** was applied over the FRP system to provide necessary UV resistance. For the durability enhancement of specific exposed concrete areas **Sikagard®-704S** hydrophobic impregnation was selected.

PROJECT PARTICIPANTS:

Owner: **Egnatia Odos S.A.**
Specification: **Egnatia Odos S.A.**
Contractor: **TERNA S.A.**
Sub-contractor: **Conic**

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