



# SIKA AT WORK

## REPAIR AND STRUCTURAL STRENGTHENING OF MUNICIPAL THEATRE, GREECE

TOTAL CORROSION MANAGEMENT: Sika® FerroGard® anodes

CONCRETE REPAIR: SikaTop®, Sika MonoTop®

STRUCTURAL STRENGTHENING: SikaWrap®, Sika® Carbodur®, Sikadur®, Gunitect

CONCRETE ADDITIVES: Sika® FerroGard® admixture, SikaFume®

PASSIVE FIRE PROTECTION: Sikacrete®-213 F

CHEMICAL ANCHORING: Sika AnchorFix®

BUILDING TRUST





# MUNICIPAL THEATRE REPAIR & STRUCTURAL STRENGTHENING

## PROJECT DESCRIPTION

The municipal theatre of Volos has a 1,000-seat capacity and was officially opened in the late 1980s. An Olympic Committee event was held during the 2004 Olympic games here when the city of Volos hosted the qualification football matches. During some renovation works in 2008, damages in the columns and building's foundation were observed which were affecting its load bearing capacity. Many parts of the reinforced concrete elements were showing signs of corrosion.

## PROJECT REQUIREMENTS

After appropriate investigation, it was decided that the following refurbishment works were needed:

- Strengthening and repair of the existing reinforced concrete using either FRP systems or concrete jackets
- Corrosion management techniques such as cathodic protection using galvanic anodes & inhibitors (admixed in repair material and be surface applied).

## SOLUTIONS

Corrosion protection:

- Surface applied inhibitor Sika® FerroGard®-903 Plus
- Galvanic anodes Sika® FerroGard®-410 Patch CC

Concrete repair:

- Exposed bar protection: SikaTop® Armatec®-110 Epocem®
- Repair mortar: Sika MonoTop® Dynamic
- Dry shotcrete: Gunitech

Structural strengthening:

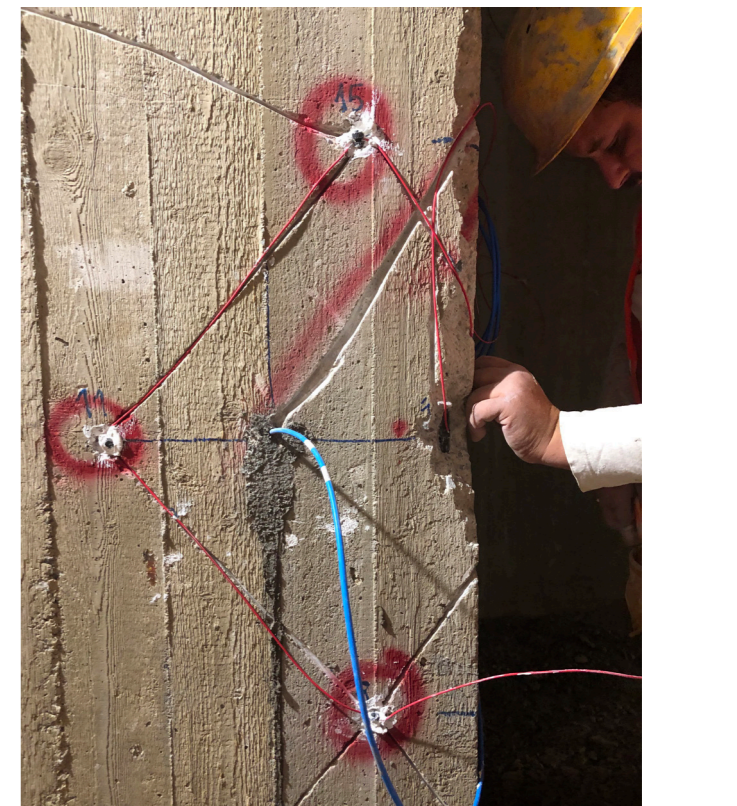
- Carbon fabric: SikaWrap®-300 C NW
- Unidirectional carbon fibre string: SikaWrap® FX-50 C
- Carbon laminate: Sika Carbodur® S-914 / E-1014

Fire protection:

- Cement based mortar: Sikacrete®-213 F

Other systems:

- Admixed corrosion inhibitor: Sika® FerroGard®-901 S
- Silica fume: SikaFume® HR E
- Chemical anchoring: Sika AnchorFix®-3030
- Synthetic roof waterproofing sheet, based on PVC: Sikaplan® G-15

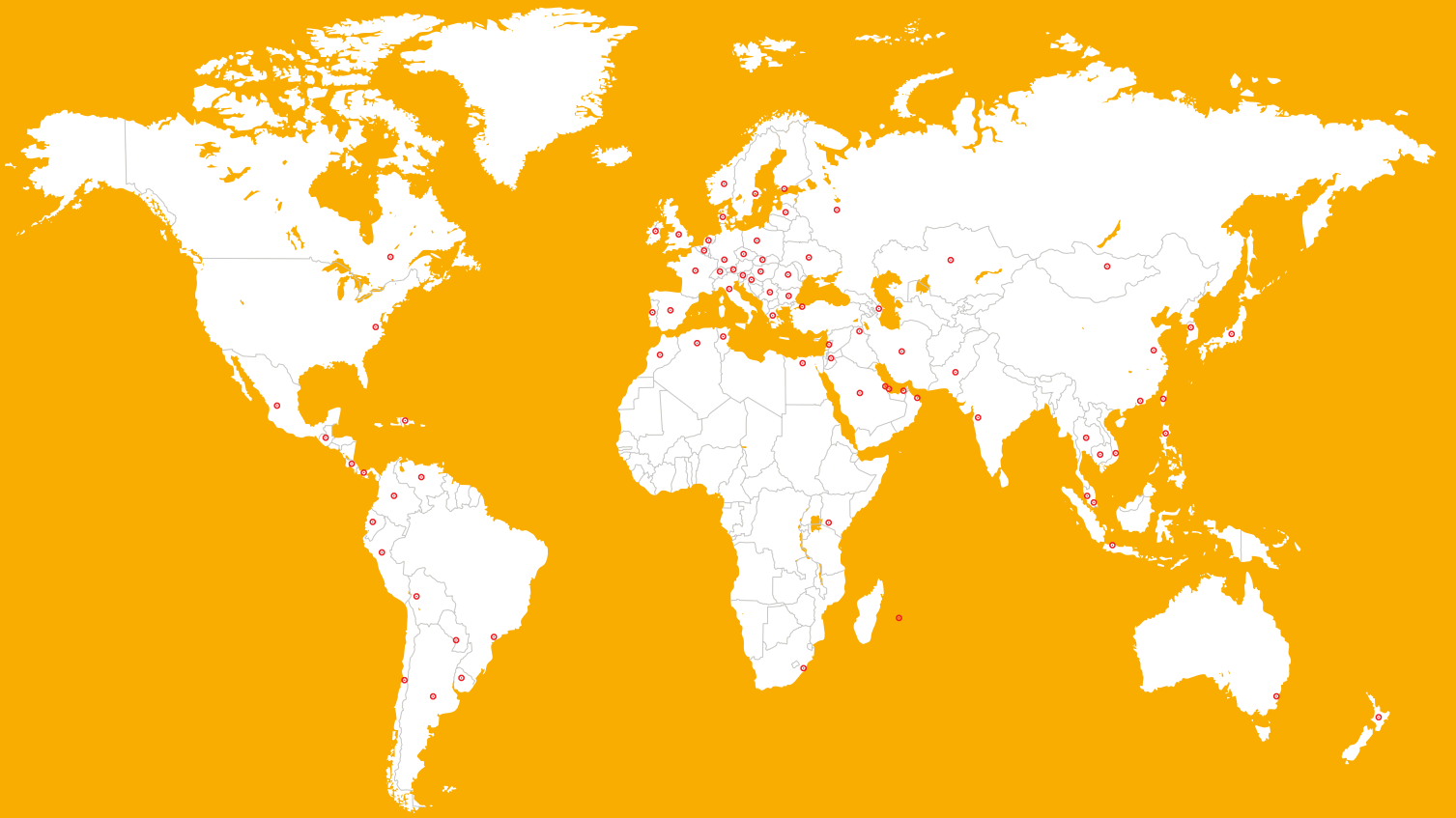


## PROJECT PARTICIPANTS

Project owner:	Municipality of Volos
Structural designer:	Chatziniolaou N.
Detailed structural designer:	Kontizas A.
General contractor:	Ektor Construction S.A.
Sub-contractor:	CONIC S.M.P.C.



# GLOBAL BUT LOCAL PARTNERSHIP



## WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, industrial flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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