



# SIKA AT WORK

## LINING OF RESERVOIR FOR SPRING WATER, TESALIA BOTTLING PLANT, GUAYAQUIL, ECUADOR

WATERPROOFING: Sikaplan® WT 4220-15 C SHEET WATERPROOFING MEMBRANE

BUILDING TRUST



# LINING OF RESERVOIR FOR SPRING WATER



## PROJECT DESCRIPTION

The Tesalia Springs Company (TSC) is a company funded more than 100 years ago in Guayaquil, Ecuador to bottle and distribute their unique and award winning Guitig Andean glacial spring water. The company is now an Ecuadorian institution in the beverages and mineral water sectors with national and international market leadership.

In its bottling plant, TSC has reinforced concrete tanks as the storage reservoirs holding the freshly abstracted spring water ready for the bottling process. Hence, it is vitally important to maintain the unique character and quality of the water during storage and also to ensure the consistent high standards of the products demanded by TSC and their customers around the world.

## PROJECT REQUIREMENTS

Over time there had been some deterioration of the concrete structures in certain areas, including surface erosion and issues with cracks and joint movement, leaking. Now the owners and their professional advisors wanted to find a durable solution to maintain the unique character and quality of the Spring water and to ensure that there were no problems in the future due to loss of water, or to the ingress of contaminants that could lead to poor water quality.

Therefore overall surface cleaning with localised repairs and sealing, followed by overall lining of the tanks was required. All of the materials used in tanks had to be free of any leachates and approved for use in contact with potable (drinking) water, plus the lining material had to be flexible to accommodate any future movement associated with the variable structural loadings during operations etc.

## SIKA SOLUTIONS

From their experience throughout the food, beverage and water industries, Sika Ecuador proposed the following solutions that were approved and the works were carried out by a specialist contractor team, trained

and supported in all of the necessary application skills and techniques by Sika:

After emptying the tanks, the concrete surfaces were cleaned by high pressure water jetting, which was also used to remove any damaged or deteriorated areas, all of the surfaces were then disinfected using Sika® Cleaner, to eliminate any residual micro-organisms.

The Sika® Waterstopping Mortar was used to seal any visible infiltrations, followed by reapplication of the Sika® Cleaner again locally when all water ingress was halted. SikaTop® Repair and Levelling Mortar was then used where necessary to restore the original concrete surface and profile where required.

Finally the internal waterproof lining was installed using a special Sika-plan® WT sheet membrane system, which consists of flexible polyolefin-based membranes, reinforced with a glass fibre fabric. Additionally, Sikaflex® adhesive sealant was used to fix and seal around the flexible membranes for detailing required due to the complex surface geometry in the upper area of the reservoirs.

Date of waterproofing works: Dec. 2014

## Used products:

Sika® Cleaner  
Sika® Waterstopping Mortar  
SikaTop® Repair and Levelling Mortar  
Sikaplan® WT 4220-15C sheet membrane  
Sikaflex® adhesive sealant  
Sikaplan® - All accessories for membrane installation

## PROJECT PARTICIPANTS

Owner: The Tesalia Springs Company  
Main contractor: The Tesalia Springs Company  
Sub contractor: CILIMPIA  
Sika organization: Sika Ecuatoriana S.A

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## SIKA SERVICES AG

Tüffenwies 16  
CH-8048 Zürich  
Switzerland

## Contact

Phone +41 58 436 40 40  
Fax +41 58 436 41 50  
www.sika.com

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