



SIKA AT WORK

Waterproofing and protection system of
fresh water storage tank, Desalination Plant,
Vassiliko, Cyprus

REHABILITATION: Sikagard®-720 EpoCem®, Sikagard® 680S Betoncolor

WATERPROOFING: Sikalastic®-841ST

BUILDING TRUST



WATERPROOFING AND PROTECTION SYSTEM OF STORAGE TANK AT DESALINATION PLANT, VASSILIKO, CYPRUS



PROJECT DESCRIPTION

Drought and lack of water has always been a problem that plagued Cyprus. Desalination plants have been operating on the island since 1997. In order to further strengthen the adequacy of the island in fresh water a new desalination plant was constructed at Vassiliko Power Station, which was delivered for operation in August 2013 and has a daily production capacity of 60.000m³ of desalinated water.

APPLICATION DEMANDS

Concrete tank for storing desalinated water, having a 1.500m² total internal surface failed during its first filling. Concrete was cracked and water was leaking. Previous rehabilitation applications using waterproofing injections did not offer the desired results. Basic requirement was the waterproofing and anticorrosion protection of the tank's concrete with a system that would have both crack bridging properties and would be suitable for use with potable water. In addition, the down time before re-operation of the tank should be kept as short as possible.

Our most recent General Sales Terms shall apply.

Please consult the most recent Product Data Sheets prior to any use and processing.



SIKA SOLUTION – APPLICATION PROCESS

Originally the surface was prepared with sand blasting and the substrate was cleaned with high pressure water jetting, followed by micro-porous sealing and levelling with the 3-component, thixotropic, epoxy-cementitious mortar **Sikagard®-720 EpoCem®**. The substrate was primed with the 2-component epoxy resin **Sikafloor®-161**, followed by application of the 2-component, sprayed, pure polyurea based, liquid waterproofing membrane **Sikalastic®-841ST**. The 100% solid content membrane would serve as the main waterproofing layer and offer simultaneously protection and crack bridging. Application was performed using the 2 machine, high pressure, hot spray equipment GRACO REACTOR HXP 3.

On the outer surface of the tank the 1-component concrete protective coating **Sikagard®-680S Betoncolor** was applied, which has high resistance against corrosive environment (coastal and industrial), in order to further enhance the durability of the concrete against aggressive atmospheric influences.

PROJECT PARTICIPANTS

Owner: **Electricity Authority of Cyprus (EAC)**

Main contractor: **IDE Technologies (ISR)**

Subcontractor: **JV Iakovou -GCC**

Applicator: **NCI Chemicals**

Sika Distributor: **Domocehmica Ltd.**

Sika Hellas ABEE
15 Protomagias Str.
145 68, Kryoneri
Athens-Greece

Contact
Tel: +30 210 8160600
Fax: +30 210 8160606
www.sika.gr / sika@gr.sika.com

