



Renovation of the Belvédère Swimming Pool



ABOUT THIS PROJECT:		
Market Segment: General Construction	Owner: Tunis Municipality	Products Used: Xypex Admix C-1000 NF Xypex Concentrate Xypex Patch'n Plug
Engineering Team: Mr. Fredj and Adel Maatouk, Rachid Nouri, BIAT & Veritas Tunisia Engineers	Supervising Authority: General Directorate of Military Engineering	Ready-Mix Supplier: Job Beton
Location: Tunis, Tunisia	Contractor: SBF Société Bouzguenda Frères	Distributor: Le Record

The Belvédère Municipal Swimming Pool in Tunis, Tunisia, underwent a significant renovation in 2024, blending modern infrastructure improvements with the preservation of a historic landmark.

Owned by the Tunis Municipality and supervised by the General Directorate of Military Engineering, the project brought together an expert engineering team comprising consulting engineers Mr. Fredj and Mr. Adel Maatouk, Bicotec Ingénierie under the leadership of Rachid Nouri, and BIAT & Veritas Tunisia.

Execution was managed by SBF Société Bouzguenda Frères, while ready-mix concrete was supplied by Job Beton. Le Record provided its guidance on the waterproofing technology.

This renovation project required an approach that respected the site's distinctive Art Nouveau floral-shaped columns and overall historical character. With a structural grid spanning 5 meters and a total surface coverage of 2,000 square meters, bridging classic elegance with modern functionality.

Xypex crystalline waterproofing was selected for its ability to provide lasting protection against water ingress, chlorides, and other harmful chemicals. The system's catalytic reaction forms non-soluble crystals within concrete pores, capillaries, and microcracks, thereby reducing permeability, enhancing the resistance against harmful chemicals, such as chlorides. Additionally, whenever moisture is present within the concrete matrix, Xypex reactivates to generate additional crystals, enabling it to self-heal new hairline cracks that may appear and extending the structure's durability.



The project used a Xypex system solution to ensure comprehensive waterproofing and structural integrity: 3.2 tonnes of Xypex Admix C-1000 NF were incorporated directly into the concrete mix, providing integral protection at the point of placement; 1.5 tonnes of Xypex Concentrate, a surface-applied slurry, reinforced critical joints and existing structures; 0.8 tonnes of Xypex Patch'n Plug shut tie holes, and small repairs.

These combined applications overcame the unique challenges posed by continuous exposure to chlorides and the high-water table—making the structure susceptible to both water ingress and egress. In these conditions, Xypex's integral waterproofing approach was especially effective, as it waterproofs when applied on the positive and negative sides and eliminates the risks of peeling, degradation, and mechanical damage associated with traditional coatings and membrane-based systems.

The result is a durable, watertight facility that will require minimal maintenance over its lifetime, underscoring the long-term cost efficiency and environmental benefits of self-healing concrete technologies.

Ultimately, the Belvédère Municipal Swimming Pool renovation exemplifies how advanced engineering solutions can revitalize a cherished urban landmark while preserving its historical essence. It remains a testament to Tunis's cultural heritage and a model for sustainable infrastructure upgrades—maintaining aesthetic refinement, extending service life, and showcasing the proven performance of Xypex crystalline waterproofing.

