

GIESSEN POOL REFURBISHMENT IN BELP-BERN, SWITZERLAND

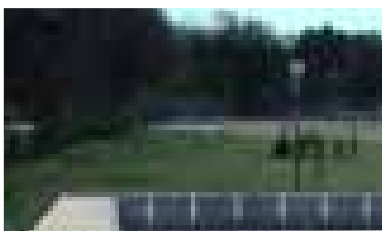


In January, 1996, the City Council of Belp, Switzerland, commissioned Zeltner & Maurer AG, Construction Engineers, to prepare a refurbishment concept for the three pools. To all of those concerned it was important to arrive at a low-cost, ecological solution to meet current needs.

The first stage included visiting several public pool facilities which had been restored using various products. After carefully weighing up the pros and cons of the products reviewed, it was decided to undertake the refurbishment with Vandex.

Original Condition

With time, the surface of pools and water channels had become abraded. The pools were very



The pool after its refurbishment in spring 1997.



rough, giving rise to increased growth of algae which entailed the heavy use of chemicals and increased cleaning costs. The use of acidic cleaning agents reduced the alkalinity of the concrete, weakening the protection of the reinforcement steel. Also, the rough surfaces were unpleasant for swimmers.

With few exceptions, the reinforcement steel showed no corrosion. The timing of the work was ideal for restoring the pool to its original state at a reasonable cost.

Refurbishment Concept

Substrate cleaning: The walls were sandblasted and the floors shotblasted. Larger irregularities and voids had to be levelled first and repaired with VANDEX UNI MORTAR 1.

Coating: The slab, walls and channels were sprayed with VANDEX BB 75 (6 kg/m² = 3 mm layer thickness), producing a smooth waterproof surface which inhibits algae growth and prevents corrosion of reinforcement steel. A fillet was made with VANDEX UNI MORTAR 1 in the area where the slab and the wall meet.

The coat quality is directly dependent on the preparation, climatic conditions and curing. This was achieved by using temporary roofs.



The chosen system excels with the following properties:

- Water impermeability
- Frost resistance
- Compatibility with concrete (cementitious and without polymer additives)
- Protection of concrete
- Resistance to abrasion
- Water cannot track along interface
- Ease of cleaning

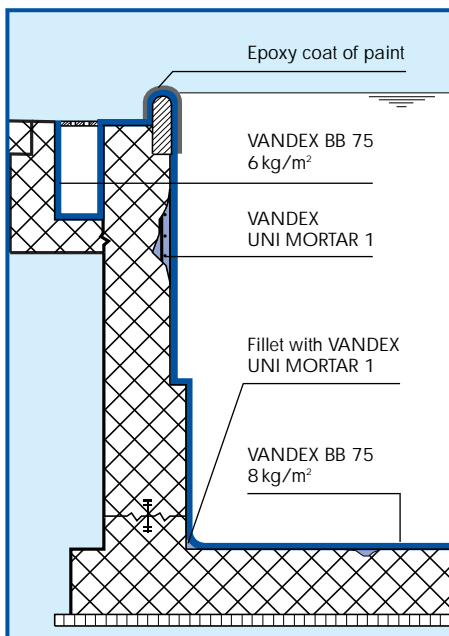
Remark

Vandex technical documentation offers standard specifications for waterproofing and refurbishment of swimming pools.



Built in 1979/80, the Giessen pool was presented with a new look at the opening of the 1997 season.

Photographs bottom centre: VANDEX BB 75 application using fine-grain mortar spray gun.



Builder: Municipality of Belp **Engineer:** Zeltner & Maurer, Belp **Vandex Applicator:** Iso-San AG, Steffisburg

VANDEX BB 75

Waterproofing Slurry

- no efflorescence
- for concrete, masonry and render
- can be used against active or passive water pressure
- application by machine

Application

VANDEX BB 75 is applied on concrete, masonry and rendered surfaces requiring protection from the effects of water and moisture.

Properties

VANDEX BB 75 is waterproof (tested up to 7 bars) and may be applied onto vertical as well as horizontal surfaces. VANDEX BB 75 is durable and resistant to frost and heat after curing, but still permeable to water vapour.

Specifications:

Setting: approx. 2-4 hours

Compressive strength: 40 N/mm² 28 days

Bending tensile strength: 6 N/mm² 28 days

Modulus of elasticity: 2.14 x 10⁴ N/mm² 28 days