

# THE WATER TEMPLE

by Stefan Schallerbauer and Helmut Schweda, Mapei GmbH (Austria)

A holiday in the Ötztal Alps (Austria) normally means long, winding descents on the snowy pistes, or one of the many other sporting activities surrounded by the snow-bound winter scenery. But now, since October 2004, the offer in Ötztal has been enriched by yet another fascinating amenity: the "Aqua Dome" thermal baths in Längenfeld. This "aquatic temple" combines the unspoiled mountain environment with one of the largest thermal projects in Europe. The architects have designed spectacular geometric forms into the complex, to add a new, charming touch to the Tyrolean panorama, and thanks to a large use of glass, have created an original blend with the surrounding Alpine environment.

The entire structure covers an area of approximately 50,000 m<sup>2</sup>. It includes a 4-star hotel with 140 rooms, a thermal complex comprising an indoor, glass-covered area, an outdoor area and the so-called "Noah's Ark of the Alps", an area specially created for families and young children.

The walls and floors of a number of areas have been installed using Mapei products, which are more than capable of

meeting an endless range of requirements of the materials employed: in fact, ceramic and porcelain tiles, stone slabs, wood and textile coverings have all been laid.

The wellness area includes a 500 m<sup>2</sup> workout area and another zone dedicated to relaxing. This zone includes a "Loft" sauna, a Finnish sauna, a herbal sauna and steam baths, to satisfy all the desires and wishes of even the most discerning visitor.

The centre of the complex is made up of two halls with covered, hot-water swimming pools (34-36°C) and raised galleries dedicated to regeneration treatments.

By crossing a bridge, visitors may easily move from the second thermal swimming pool to the large "crystal dome" which marks the entrance to the outdoor area. Here, after passing through two swimming pools with running water, there is the undisputed architectural focal point of the entire complex, with three external, hanging pools of various sizes (up to a maximum of 16 m), supported by columns of up to 8 metres in height.

The seats in one of these pools, the "Sole" pool, are formed



by an inner curved nucleus of foam polystyrene, on which MAPELASTIC\* two-component, waterproofing cementitious mortar was applied by spray at a thickness of approx. 2-3 mm. Ceramic tiles were then laid on these surfaces using ADESILEX P9\* cementitious adhesive. Because of the presence of salt water, the tile joints were grouted using KERAPOXY\* two-component, acid-resistant epoxy grout. Stone slabs were laid in the "Loft" sauna, on a substrate formed using TOPCEM PRONTO\*, ready-to-use, prepacked mortar for fast-drying screeds with controlled-shrinkage, mixed with PLANICRETE\* synthetic rubber latex. In the area dedicated to families and small children, which takes on the form of a sailing ship and which is separate from the main complex, one of the main attractions for the younger guests is the 90m-long slide. Various types of porcelain tiles were laid in this area using KERAFLEX\* cementitious adhesive, whereas the underwater surfaces were laid using ADESILEX P9\* cementitious adhesive, particularly recommended for laying small-sized porcelain tiles. In the bathrooms and changing rooms for the swimming


pools, MAPEGUM WP\* liquid membrane was employed to waterproof the walls and floors, while ULTRACOLOR\* was used for grouting the flooring joints. The common areas in the hotel were prepared using EPORIP\* adhesive to seal the cracks in the screeds for all the floors, before laying slate tiles in the coffee areas and corridors using KERAQUICK\* cementitious adhesive. The tile joints in the floors in the bathrooms were grouted with KERACOLOR FF\* cementitious grout, while the joints in the corridors and main hall in the centre were grouted using ULTRACOLOR\*. MAPESIL AC\* was employed to seal the expansion joints in all the above areas. In all, a total of approximately 26,000 m<sup>2</sup> of tiles and stone slabs were used in the "Aqua Dome". Parquet floor covering was also widely used: in fact, this material was chosen for the hotel rooms, the restaurant, and the fitness and wellness areas. ADESILEX PA\* synthetic resin based adhesive was used for laying the floors, after treating the substrates with PRIMER PA\* ready-to-use, synthetic resin based primer.

PROJECTS





Parquet was also laid in the sauna area, where ULTRABOND P990 1K\* one-component, polyurethane, elastic adhesive was the preferred choice.

Textile floor covering was also used in some areas of the hotel. The substrates were initially treated with PRIMER G\* synthetic resin based primer in water dispersion with very low emission of volatile organic compounds. The next step was to apply NIVORAPID FF\* thixotropic cementitious levelling mortar, along with more than 10 tonnes of ULTRAPLAN ECO\* ultra fast-hardening, self-levelling compound with a very low emission of volatile organic compounds. Finally, approximately 5 tonnes of ROLLCOLL\* universal adhesive in water dispersion was used to bond the textile floor covering. Thanks to the wide range of materials used, each with its own specific laying characteristics and requirements, Mapei were given the opportunity of demonstrating the wide range of products available and the reliability of the results achieved with each different kind of application. 

Our thanks go to "Realta Mapei", n. 3, published by Mapei GmbH (Austria), Mapei GmbH (Germany) and Mapei Suisse SA (Switzerland), from which this article was taken.



**\*Mapei Products:** the products referred to in this article belong to the "Products for Ceramic Tiles and Stone Materials" and "Products for the Installation of Resilient, Textile and Wood Floor and Wall Coverings" ranges. The technical data sheets are available on the "Mapei Global Infonet" CD/DVD or at the web site: [www.mapei.com](http://www.mapei.com).

Mapei's adhesives and grouts conform to EN 12004 and EN 13888 standards.

Installation of ceramic tiles and stone materials:

**Adesilex P9 (C2TE):** high performance cementitious adhesive with no vertical slip and extended open time for ceramic tiles.

**Eporip:** two-component solvent free epoxy adhesive, for monolithic sealing of cracks in screeds.

**Keracolor FF (CG2):** high performance cementitious grout, polymer modified, water-repellent with DropEffect®, for joints up to 6 mm.

**Keraflex (C2TE):** high performance cementitious adhesive, with no vertical slip and extended open time for ceramic tiles and stone material.

**Kerapoxy (RG):** two-component acid-resistant epoxy grout, available in 26 colours, for joints of at least 3 mm. Can also be used as an adhesive.

**Keraquick (C2FT, class S2 according to EN 12002 when mixed with Latex Plus):** high performance, deformable, rapid setting cementitious adhesive with no vertical slip for ceramic tiles and stone material.

**Mapegum WP:** fast drying flexible liquid membrane for interior waterproofing.

**N.B.** The product has been replaced by Mapegum WPS.

**Mapelastic:** two-component flexible cementitious mortar for waterproofing concrete, balconies, terraces, bathrooms and swimming pools.

**Mapesil AC:** solvent-free, acetic-cross-linking mildew-resistant silicone sealant, available in 26 colours and transparent.

**Planicrete:** synthetic-rubber latex for cementitious mixes.

**Topcem Pronto:** ready to use prepacked mortar for fast-drying (4 days) normal setting screeds with controlled shrinkage.

**Ultracolor:** fast setting and drying, anti-efflorescence grout for joints from 2 to 20 mm, available in 26 colours. **N.B.** The product has been replaced by Ultracolor Plus.

Installation of wooden floors:

**Adesilex PA:** adhesive based on synthetic resins in alcohol for bonding wooden flooring.

**Primer PA:** ready-to-use synthetic resin based solvent primer for bonding with Adesilex PA.

**Ultrabond P990 1K:** ready-to-use polyurethane one-component, solvent-free, elastic adhesive for all types of wooden and laminate flooring.

Installation of textile floors:

**Nivorapid FF:** ultra-fast setting thixotropic cementitious levelling mortar for horizontal or vertical surfaces for thicknesses from 3 to 20 mm.

**Primer G:** synthetic resin based primer in water dispersion with very low emission of volatile organic compounds (VOC).

**Rollcoll:** universal acrylic adhesive in water dispersion for textile floor and wall coverings.

**Ultraplan Eco:** ultra-fast hardening (12 hours) self-levelling smoothing compound for thicknesses from 1 to 10 mm, with very low emission of volatile organic compounds (VOC).

## TECHNICAL DATA

**Aqua Dome, Längenfeld (Austria)**

**Work:** laying ceramic, wooden and natural stone coverings in the swimming-pool, wellness, thermal baths and hotel areas

**Years:** 2002-2004

**Project:** Schnöger + Fischer

**Works Management:** Vamed, Wien (Austria)

**Contractor:** Vamed

**Installation Companies:** Koller (for ceramics, porcelain tiles and natural stone) and Royal Parkett (for resilient materials)

**Materials:** ceramic tiles, porcelain tiles, natural stone slabs, wooden floors and textile floorings

**Mapei Co-ordinators:** Stefan Schallerbauer and Helmut Schweda, Mapei GmbH (Austria).