

Kristall-Therme trimini in Kochel am See expanded with PCI products

A fairytale spa

Semiprecious stones on the walls, mosaics from Italy, elaborate carved wood – the Kristall trimini family spa in Kochel am See has become a wellness oasis with a touch of Neuschwanstein. That is no accident: from the thermal baths, visitors have a direct view of the Herzogstand, where King Ludwig II once had his *Königshaus* built. In addition to magnificent furnishings, the top priority of Kristall Bäder AG was secure, high-quality tiling. The company has decades of experience with the construction and operation of thermal baths and the group has a total of 12 spas. The latest facility, Kristall trimini, was added in May 2011 and has now been expanded to form an impressive complex of sauna and wellness baths, with seven saunas on 450 square metres. The leisure pool has also been entirely renovated.

Safe construction

Waterproofing and tiling in swimming pools calls for special knowledge and products which are suitable for permanently wet areas. “We have been using PCI products to construct and refurbish our thermal baths for decades,” says Gerd Bittermann, CEO of Kristall Bäder AG. He explains the company’s decision in favour of PCI products as follows: “We want to offer our guests an exclusive,

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luxurious atmosphere. We want them to feel comfortable in our facilities. However, the underlying products are just as important. Nothing can be as annoying and cost-intensive as leaky pools or faulty tiling. This is why we place our trust in PCI. These products offer long-term reliability. Our experience with them has always been very good.”

Durable waterproofing

At Kristall trimini, PCI Seccoral 2K Rapid fast-setting special waterproofing slurry was used for waterproofing the pool bar and the walls and floors of all areas exposed to moisture. PCI Seccoral 2K Rapid is suitable for exposure classes A and B in accordance with building standard list A, part 2/1.10 and for water exposure classes W0-I, W1-I, W2-I, W3-I in accordance with the new waterproofing standard DIN 18534 (waterproofing for indoor applications). Swimming pools and tanks are subject to DIN 18535. Like all PCI waterproofing products, PCI Seccoral 2K Rapid complies with the requirements of the new standards. The bonded waterproofing has isolating, stress-relieving and crack-bridging properties and therefore offers considerable security even if cracks occur at a later date. In hot tubs and other pools filled with water with added sodium bicarbonate, glass-fibre-reinforced plastic was used for waterproofing. In addition to the waterproofing work itself, it was necessary to ensure that the concrete covering reinforcement steel in the pool bar offered effective protection against corrosion. Where necessary, the thickness of the concrete was increased to the level required using PCI Nanocret R3 multi-use repair mortar.

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Laying mosaic tiling and natural stone coverings

Mosaic tiling can only be laid on a substrate which has been properly prepared and is absolutely level. Initially, PCI carried out an adhesive tensile test to assess the strength of the concrete before it was approved for further work. After the surfaces had been cleaned using pressure cleaners, the tilers levelled the surfaces using PCI Pericret levelling compound. Mosaic tiling in the pool bar pool and tiles in all areas exposed to moisture were laid with PCI FT Klebemörtel mixed with PCI Lastoflex polymer-modified additive. The exclusive natural stone coverings in the sauna and wellness area were installed with PCI Carraflex flexible thin-based mortar which does not cause staining, even on sensitive marble. Tiling in the pools waterproofed with glass-fibre-reinforced plastic was laid with PCI Durapox NT reaction resin mortar.

Joint grouting in permanently wet areas

The pools at Kristall trimini were grouted with PCI Durapox NT: this reaction resin mortar is especially well-suited for tiling exposed to chemicals, is wear-resistant, strong and insensitive to attack by swimming pool chemicals. Areas outside the pools were also grouted with PCI Durafug NT. The dense mortar structure of this special cementitious joint grout minimises the penetration depth of pollutants and ensures high strength. Thanks to Nanofill technology, PCI Durafug NT offers high resistance to mechanical stress and is also less vulnerable to attack by acidic cleaning products than conventional cementitious joint grouts. PCI Durafug NT is an element

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in PCI's tried and tested swimming pool system – like the other products used at Kristall trimini.

A Royal spa

The alteration and extension work was completed to schedule after 21 months and Kristall trimini opened in March 2017. About €32 million were invested in the project, a public-private partnership. The result is a magnificent spa with “the very best equipment and systems”, according to Günter Beckstein. The Chairman of the Supervisory Board of Kristall Bäder AG expected up to 400,000 visitors per year when the facility was opened. This was quite a good forecast as more than 250,000 people visited the spa on the Kochelsee in the first six months.

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Project data

Project title:	A fairytale spa
Subtitle:	Kristall-Therme trimini in Kochel am See expanded with PCI products
Location:	Seeweg 2, 82431 Kochel am See
Completion year:	2017
Objective:	Refurbishment of the Kristall trimini thermal baths in Kochel am See
Project size:	Approx. 10,000 m ²
Products used:	PCI Pericret, PCI Seccoral 2K Rapid, PCI FT Klebemörtel, PCI Lastoflex, PCI Durafug NT, PCI Durapox NT, PCI Carraflex, PCI Nanocret R3
Project owner:	Kristall Bäder AG
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Photos:

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Fig. 1: Kristall Bäder AG has refurbished the Kristall trimini family spa on the banks of the Kochelsee and added a magnificent wellness oasis – using PCI waterproofing and tiling products.

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Fig. 2: Seven saunas with a total area of 450 m² have been constructed. The largest is the Herzogstand sauna with a fantastic view of the landscape, including the mountain of the same name.

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Fig. 3 und 4: “King Ludwig II would have really liked this,” says Günther Beckstein, former Minister-President of Bavaria and now Chairman of the Supervisory Board of Kristall Bäder AG, talking about the Kristall trimini spa. The water park and the extension offer the very

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best in bathing enjoyment and wellness. And the floors and pools will stay watertight and aesthetically pleasing in the long term thanks to high-quality materials from PCI.

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Fig. 5: For the laying of the mosaic tiling, the substrate was first levelled with PCI Pericret. The tiles were laid using PCI FT Klebemörtel mixed with PCI Lastoflex polymer-modified additive. In the soda pool, PCI Durapox NT plus reaction resin mortar was used for laying the glass mosaic tiling on glass-fibre-reinforced plastic waterproofing.

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Fig. 6: Elastic grouting between the screed and the rising wall in the pool with PCI Apogel E.

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Fig. 7 and 8: The mosaic-lined pools of Kristall-Therme trimini create an exclusive and elegant impression. To ensure durable waterproofing, PCI Seccoral 2K Rapid fast-setting special waterproofing slurry was used.

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Fig. 9: The anti-slip tiling on the pool surrounds and in showers and changing rooms was laid using PCI FT Klebemörtel thin-bed adhesive with PCI Lastoflex polymer-modified additive.

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Fig. 10: The mosaic tiling of the pool was laid using PCI Durapox NT plus. This reaction resin mortar is especially well-suited for tiling exposed to chemicals, is wear-resistant, strong and insensitive to attack by swimming pool chemicals. PCI Durafug NT special cementitious joint grout was used for the pool surround.

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Fig. 11: Ready for the water. The tiling in the pool bar has been laid and grouted. Thanks to PCI Seccoral 2K Rapid, the substrate is absolutely watertight.

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Fig. 12: The alterations and extensions were completed in 21 months and Kristall trimini was opened to schedule in March 2017 – a high-grade spa with “the very best” equipment and systems, according to Günter Beckstein.

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About PCI

PCI Augsburg GmbH is part of the business unit Construction Chemicals of BASF and leader in the tile laying materials sector for specialist firms in Germany, Austria and Switzerland. In addition, the company supplies product systems for waterproofing, concrete protection and repair, as well as a complete product range for the flooring sector. The PCI Group employs a staff of more than 1,200 in Europe and generated sales of over €314 million net in 2017. Further information about PCI on the Internet under www.pci-augsburg.de.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The approximately 115,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into five segments: Chemicals, Performance Products, Functional Materials & Solutions, Agricultural Solutions and Oil & Gas. BASF generated sales of more than €64.5 billion in 2017. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (AN). Further information at www.basf.com.

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