

Floor refurbishment in the Catholic church of St. Margaretha in Salach

A firm foundation

Refurbishment work in a church presents considerable challenges – as regards finance, planning and craftsmanship. This also applies to the floor. The surfaces involved are very large, with complex shapes, and are interrupted by pillars. Nevertheless, the screed should be homogeneous, with as few joints as possible. These objectives were met at the Catholic church of St. Margaretha in Salach, Baden-Württemberg: the new screed, with an area of 650 m². was laid with only two joints and no irritating movement joints were required in the parquetry. How was that possible? With a well-thought-out joint plan and the right screed cement, both supplied by PCI Augsburg GmbH.

The new cement screed was laid in the spring of 2017 in the course of the interior refurbishment project. The project owner and architect opted for PCI Novoment Z3 fast-setting screed cement which meets all the requirements faced, features low stress levels and deformation, and can be walked on and covered very soon after laying. PCI adviser Stefan Schweizer provided advice on site and developed the joint plan together with the architect and the contractor, as well as providing support during installation work and in connection with site coordination.

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Demanding: screed surfaces up to 236 m²

Parquetry or tiles can only be laid on a high-quality, sturdy screed that ensures effective pressure distribution and provides an even level. However, the requirements faced by the new screed in the church of St. Margaretha were even more demanding: the gradient from the choir to the main entrance and adaptation to the side entrances called for different installation levels; the thickness of the screed therefore varied from 40 to 100 mm. However, the greatest challenge was to install large seamless screed areas of about 140 m², 216 m² and 236 m², which are beyond the scope of the applicable standard, including pillars and an area of very complex geometry around the altar.

Only two joints with PCI Novoment Z3

Within the space of three days, the contractor responsible, ADE Fußbodenbau GmbH from Backnang, laid the screed on the total surface area of 650 m² with PCI Novoment Z3, seamlessly on an insulating layer. The craftsmen distributed the fast-setting cement evenly and smoothed it using machines. Thanks to its low-stress, low shrinkage behaviour and the long working time of the screed material, the oversized areas were completed effectively using PCI Novoment Z3. The shrinkage behaviour of conventional screeds would require a joint pattern of 6 x 6 m. In contrast, screeds laid using PCI Novoment Z3 do not need such closely-spaced joints. The planners were therefore able to reduce the number of screed joints to two and it was possible to arrange the joints and the covering in such a way that no movement joints were needed in the parquetry.

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“I enjoy working with PCI Novoment Z3, as there is no cracking or shrinkage in the screed as it dries,” says Joachim Kraft, screeding project manager with ADE Fußbodenbau GmbH. “There was no need for any reworking at the expansion and cut joints, edges of pillars or around heating shafts. That saves a lot of time.”

Easy application, fast progress

■ PCI Novoment Z3 can be used for constructing grade CT-C40-F7 screeds to DIN EN 13 813 in accordance with the manufacturer’s instructions. The binder used ensures an extremely low-shrinkage fast-setting cement screed which is resistant to extreme temperatures (from – 30 °C to + 80 °C) and moisture. It can be applied both manually and by pumping. Screeds laid using PCI Novoment Z3 can already be walked on after one day and covered with tiles after three days. Despite these first-setting properties, they have a long working time of about one hour. The fast-setting cement is a very low-emission product with the EMICODE seal EC1 Plus R. The new package size introduced in 2017 also makes for easier handling on site: “The new 20-kilogram sack not only means that PCI Novoment Z3 is easier to handle; it is also easier to calculate the amount of sand needed with a mixing ratio of 1:5 if you have a 20 kg bag. Especially for refurbishment products, the very low-emission properties of the product help planners and project owners make decisions,” Joachim Kraft explains.

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Project data

Project title:	A firm foundation
Subtitle:	Floor refurbishment in the Catholic church of St. Margaretha in Salach
Location:	Salach
Year of completion:	2017
Objective:	Laying of large screed areas with only two joints
Project size:	650 m ²
Products used:	PCI Novoment Z3
Project owner:	Roman Catholic Parish of St. Margaretha
Contractor:	ADE Fußbodenbau GmbH
PCI applications technician:	Reinhard Hübner
PCI technical adviser:	Stefan Schweizer
Contact	<p>PCI Augsburg GmbH Piccardstraße 11 86159 Augsburg Phone: +49 821 5901-0 Fax: +49 821 5901-416 Email: pci-info@basf.com www.pci-augsburg.de</p>

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Photos (for downloading PI)



Fig. 1: The Catholic church of St. Margaretha in Salach in the Rural District of Göppingen: a new screed with a total floor area of 650 m² was laid using PCI Novoment Z3.

<https://pics.pci-augsburg.com:443/php/index.php?database=2&downloadimage=9256&size=8218x5792&format=&check=aa02236a9c6d9a6f1ce5c516ecf1a7f3>

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Fig. 2: The fresh screed cement was pumped onto the floor of the church.

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Fig. 3 and 4: The long working time of about one hour gave the project team enough time to cover the large screed areas with PCI Novoment Z3.

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<https://pics.pci-augsburg.com:443/php/index.php?database=2&downloadimage=9228&size=8323x5549&format=&check=44db63ef0ec9a94ff267d69b7f131eae>

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Fig. 5: Thanks to the very low stress and deformation values of PCI Novoment Z3, it was possible to lay large areas of screed.

<https://pics.pci-augsburg.com:443/php/index.php?database=2&downloadimage=9246&size=8688x5792&format=&check=1750a282cf8bedbd931a32435cbb0516>

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Fig. 6: The craftsmen worked hand-in-hand: following the installation and distribution of the screed material on the substrate, it was smoothed using machines.

<https://pics.pci-augsburg.com:443/php/index.php?database=2&downloadimage=9247&size=8379x5586&format=&check=f6c0b5789ff12f0d0b5c7fb0965d560a>

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Fig. 7: The new screed in the church of St. Margaretha, with only two joints: the screed could be walked on after only one day and it was possible to lay the covering after three days.

<https://pics.pci-augsburg.com:443/php/index.php?database=2&downloadimage=9224&size=8016x5346&format=&check=0d8ffa7c5b4f425e9e5d1a409f7ad567>

<https://pics.pci-augsburg.com:443/php/index.php?database=2&downloadimage=9223&size=5792x8688&format=&check=4d14eb3d569be19a664cedf0871d95aa>

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About PCI

PCI Augsburg GmbH is part of the Construction Chemicals business unit of BASF and the leader in the tile laying materials sector for specialist contractors in Germany, Austria and Switzerland. In addition, the company supplies product systems for waterproofing, concrete protection and repair, as well as a full product range for the soft flooring sector. PCI employs a workforce of more than 1,200 people in Europe and generated net sales of over €250 million in 2016. Further information about PCI on the Internet at www.pci-augsburg.de.

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