



Press Release

PORR's sustainable pilot project in the Filder Tunnel Cement-free construction materials show promise

Vienna, 07.11.2022 - Innovation in the Filder Tunnel: On a Deutsche Bahn project, PORR is using a sustainable construction material developed inhouse for the first time: The new annular gap mortar is bound with granulated slag, a recycled product, instead of cement. The pilot project has been a complete success and the practically cement-free construction material has already been patented. PORR is now looking for further cooperation partners.

Eight percent of global greenhouse gas emissions come from cement production. This is used in many building products, including shotcrete and annular gap mortar. "This is why we are increasingly looking at new, innovative solutions", says PORR CEO Karl-Heinz Strauss. The sustainable aspect of the new products is that recycled products are added instead of cement - thereby cutting the environmental burden twice over.

For the Filder Tunnel, which is part of Stuttgart 21, PORR, together with the German company MC-Bauchemie, developed and used an annular gap mortar. It replaces cement with granulated slag. This finely ground blast-furnace slag is a waste product of steel manufacturing. "The nature of the soil means that a cement-based construction material would not have been suitable", says Strauss. "This gave us the opportunity to use this brand new construction material".

Additional partners sought

The pilot project has been a complete success - and also provides a good template for future building projects. Strauss: "Apart from allowing us to contribute to reducing CO₂, this construction material has two fundamental advantages. It is less sensitive to environmental factors than concrete containing cement. And it can be transported for long periods without any problems before it is processed as it needs an activator to fully harden".

The new annular gap mortar has already been patented. PORR is now looking for more partners who are willing to work with this construction material. "Clients are often very conservative in their tender conditions and demand a certain cement content", says Strauss. "Work is still needed here to convince them".

In addition, PORR is already testing other recycled products to assess their suitability as binders in construction materials, including brick sand. Across the Group, PORR recycles 2.2 million tonnes of construction materials per year. 1.7m tonnes of this is used in place of primary raw materials at the company's own construction sites and facilities.



Innovation in the Filder Tunnel © Arnim Kilgus

The press release including high-resolution images is available for download from the [PORR Newsroom](#).

For enquiries, please contact:

Milena loveva

Company Spokesperson

PORR AG

T +43 50 626 1763

comms@porr-group.com