Press Release

CO_2 Research Project “catch4climate” Officially Inaugurated with 200 Guests from Politics and Industry

With the start of operations of the world’s first research and development facility for CO_2 capture based on the Pure Oxyfuel process, the European cement manufacturers Buzzi/Dyckerhoff, Heidelberg Materials, SCHWENK Zement, and Vicat are sending an important signal for the decarbonization of the construction materials industry.

Mergelstetten, Germany, July 8, 2026 – After seven years of intensive planning, development, and implementation, the research company CI4C GmbH & Co. KG today officially inaugurated the world’s first of its kind research and development facility applying the Pure Oxyfuel process designed by thyssenkrupp Polysius. The facility is intended to demonstrate how CO_2 emissions from cement production can be captured energy- and cost-efficiently in the future using the Oxyfuel process and thus marks a significant milestone in the transformation of the cement industry.

Four Partners, One Goal: CO_2 Reduction in the Cement Industry

The four European cement manufacturers Buzzi SpA/Dyckerhoff GmbH, Heidelberg Materials AG, SCHWENK Zement GmbH & Co. KG, and Vicat S.A. founded the research company CI4C GmbH & Co. KG back in 2019 to jointly realize the flagship project “catch4climate.” With investments of more than €120 million, a dedicated rotary kiln line with a clinker production capacity of 450 metric tons per day was built at the Mergelstetten cement plant. The facility is the first to use the so-called Pure Oxyfuel process for CO_2 capture and is dedicated exclusively to research and development. The project was implemented without the use of public funding.

“The start of operations marks a special milestone for everyone involved. When companies tackle shared challenges together within the framework of antitrust-approved cooperation, such forward-looking achievements become possible. Through ‘catch4climate,’ we are generating valuable insights for the future of CO_2 capture in the cement industry and creating

significant potential to advance climate protection," says Jürgen Thormann, Technical Managing Director of CI4C GmbH & Co. KG.

Around 200 guests from politics, industry, associations, academia, and the media, as well as representatives of the four shareholder companies, attended the official inauguration. Among the guests was Baden-Württemberg's Minister for the Environment, Thekla Walker. The event program included expert presentations and discussions on the challenges and opportunities of industrial transformation. A special feature of the event was a custom-designed cement tunnel that took visitors on a journey through the history of cement as a building material — from the beginnings of Roman concrete to the prospects of climate-compatible cement production.

Pure Oxyfuel Process Field Test

In conventional combustion processes, air is typically used as the source of oxygen. The Pure Oxyfuel process replaces the air with pure oxygen. This creates a highly concentrated CO_2 stream, making the capture of carbon dioxide considerably easier. In the long term, the process is intended to provide the foundation for efficiently capturing CO_2 and subsequently storing it or reusing it as a feedstock for other industrial processes.

In the weeks leading up to the opening ceremony, the project team had already achieved important milestones: at the end of May 2026, clinker was successfully produced for the first time. In mid-June, the first supply of oxygen to the facility took place. At the same time, the objectives of the first operating campaign were fully achieved — an important step on the way to the upcoming test phases.

The goal of the project is to create the technical prerequisites for the large-scale deployment of CO_2 capture technologies in the cement industry. In doing so, it aims to make a significant contribution to reducing process-related CO_2 emissions, which are unavoidably generated during cement production.

The knowledge gained will help further develop CO_2 capture technologies and create the foundation for their broader deployment across the European cement industry.

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