Heidelberg Materials

Press Release

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# Closing the loop: Heidelberg Materials inaugurates first-of-its-kind recycling plant for selective separation of demolition concrete in Poland

- **State-of-the-art facility near Katowice, Poland, introduces high-quality separation and sorting at industrial scale to fully recycle demolition concrete.**
- **The proprietary crushing mechanism enables sophisticated separation and sorting capabilities obtaining aggregates of the highest quality, equivalent to the one of virgin raw materials.**
- **Through the patented ReConcrete process, recycled concrete paste (RCP) is recovered combining circularity with decarbonisation.**
- **RCP can be used as an alternative raw material in clinker production or as an alternative cementitious material.**
- **In addition, it can absorb and permanently bind $CO_2$.**
- **Heidelberg Materials highlights its strong commitment to closing the loop, aiming to offer circular alternatives for 50% of its concrete products by 2030.**

Heidelberg Materials has commissioned an innovative recycling plant for selective separation at its production site near Katowice, Poland. The first-of-its-kind facility features a proprietary crushing mechanism that enables sophisticated separation and sorting capabilities to fully recycle demolition concrete and substitute virgin materials in concrete production. With a capacity of up to 100 tonnes of concrete per hour, Heidelberg Materials is the first company in the industry to introduce high-quality, selective concrete separation at this scale.

Nicola Kimm, Chief Sustainability Officer and Member of the Managing Board of Heidelberg Materials said: “Thanks to our strong commitment to continuous innovation, we are now introducing a revolutionary and commercially viable technology combining circularity with decarbonisation on our path to net zero. Innovations like these help to accelerate our transformation and highlight our ambition to closing the loop offering circular alternatives for 50% of our concrete products by 2030.”

“With our award-winning ReConcrete approach, we have already shown on a pilot scale that concrete can be fully recycled without loss of quality,” said Jon Morrish, Member of the Managing Board of Heidelberg Materials and responsible for the Group area Europe. “Our new recycling plant marks an

important milestone of implementing this innovative technology on a completely new scale, reinforcing our industry-leading position in driving circularity".

**Driving circularity with ReConcrete**

As part of the company's patented ReConcrete process, demolition concrete is broken down into its original constituents through a newly designed, proprietary crushing mechanism. The fractions obtained include sand and gravel of the highest quality, equivalent to the one of virgin raw materials. Recycled concrete paste (RCP) is the finest fraction of the separation process: It can be either used as an alternative raw material for clinker production replacing limestone and reducing $CO_2$ emissions or as a secondary cementitious material.

In addition, RCP can act as a carbon sink, absorbing and permanently binding $CO_2$ over the entire lifespan of an infrastructure or building project. To make use of this potential and initiate what is known as "enforced carbonation", the RCP can also be exposed to raw exhaust gases from cement production. The resulting carbonated RCP (cRCP) has the potential to mineralise about 150 kg $CO_2$ per tonne of RCP, significantly reducing $CO_2$ process emissions caused by carbon-intensive clinker production. At the same time, the cRCP can be used as a low-carbon cementitious material by reducing the amount of clinker necessary.

To further explore this technology, Heidelberg Materials is currently building an industrial pilot facility for enforced carbonation at its cement plant in Górażdże, Poland. The RCP obtained at the recycling plant near Katowice will be transported to the pilot facility in Górażdże, where it will be exposed to the exhaust gases from the kiln. Mechanical completion of the facility is expected by the end of 2024.

**Becoming a force in recycling**

In order to meet the growing demand for sustainable building materials, Heidelberg Materials is continuously investing in infrastructure and technologies that pave the way to a circular economy as part of its portfolio optimisation. The company recently announced the acquisition of B&A Group, one of the leading construction soil and aggregates recycling companies in South West England specialised in the supply of recycled and primary aggregates as well as site clearance, earthworks, land remediation, and sustainable land regeneration. Other acquisitions in the field of recycling include Mick George Group (UK), Highway Materials, Aaron Materials, Green Drop Rock Products and RMS Gravel Inc. (all in the US) as well as RWG and SER Group (both in Germany), which help further expand the company's presence in core markets while strengthening its range of circular materials.

**Caption**
Recycling facility at Heidelberg Materials' production site near Katowice, Poland.

**About Heidelberg Materials**
Heidelberg Materials is one of the world's largest integrated manufacturers of building materials and solutions with leading market positions in cement, aggregates, and ready-mixed concrete. We are represented in around 50 countries with around 51,000 employees at almost 3,000 locations. At the centre of our actions lies the responsibility for the environment. As the front runner on the path to carbon neutrality and circular economy in the building materials industry, we are working on sustainable building materials and solutions for the future. We enable new opportunities for our customers through digitalisation.

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