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TITAN Group and thyssenkrupp Polysius join forces to develop pioneering low-carbon products with meca® clay technology

TITAN Group and thyssenkrupp Polysius are taking another significant step toward low-carbon cement production by announcing a strategic partnership to advance Polysius' meca® clay—a breakthrough technology designed to significantly reduce CO₂ emissions from cement production.

This collaboration, formalized through a Memorandum of Understanding (MoU), represents a pivotal milestone in TITAN's commitment to scaling sustainable building materials across Europe and beyond.

meca® clay activates alternative cementitious materials (ACMs) to partially replace clinker, whose production process is the primary source of CO₂ emissions in cement manufacturing – thereby reducing emissions and energy consumption without compromising performance. TITAN will implement this technology for the first time at its Patras cement plant in Greece, where the TITAN Centre for Advanced Technologies is currently being established, with pilot activities planned for 2026 and further expansion to follow. The goal is to produce low-carbon cement with a clinker-to-cement ratio below 40%, compared to 93% in Original Portland Cement, strengthening TITAN's green cement portfolio.

“This initiative forms a key part of our strategy to establish the TITAN Centre for Advanced Technologies in Patras, an innovation hub designed to leverage and accelerate our Group's diverse portfolio of decarbonization, advanced manufacturing, and innovation projects,” said Samir Cairae, Chief Technology Officer at TITAN Group. “This partnership further advances TITAN's mission to decarbonize cement production and drive the transition toward a low-carbon future.”

By combining TITAN's global expertise and innovation mindset with thyssenkrupp Polysius' technological excellence, the two partners aim to accelerate the next generation of high-performance low clinker materials for Europe and US markets that enable greener cities and more sustainable infrastructure.

“This collaboration with TITAN is a strong confirmation: demand for solutions like meca® is not theoretical - it is coming from leading producers who are now industrially implementing decarbonisation at scale.”

Dr. Björn Olaf Assmann, Head of Innovation at thyssenkrupp Polysius

“meca® unlocks an underexploited decarbonisation lever in the core process. This partnership shows how fast the technology is moving from pilots into scalable product”, added Dr. Björn Olaf Assmann, Head of Innovation at thyssenkrupp Polysius.

The collaboration also supports TITAN's ambition to deliver net-zero concrete by 2050, aligned with the company's strategy and global climate goals.



The bottom line: By combining TITAN's global expertise and innovation mindset with thyssenkrupp Polysius' technological excellence, the two partners aim to accelerate the next generation of high-performance low clinker materials for Europe and US markets that enable greener cities and more sustainable infrastructure.
