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Pioneering new technology by TITAN recycles landfilled fly ash while reducing cement & concrete carbon footprint

Separation Technologies (ST), a fully-owned TITAN Cement Group US-based subsidiary, has introduced an innovative process to recycle fly ash from landfills; the recycled fly ash is then used to reduce the carbon footprint of cement and concrete products of TITAN and ST's clients.

Through this new technology, fly ash is reclaimed from landfills before being transformed into consistent, high-quality, green end-products. These products – launched by TITAN and branded in the US as ProAsh and EcoTherm – can be used as sustainable raw materials in cement, concrete, and power generation. Importantly, TITAN's exclusive technology can also provide a unique solution for the cleanup and remediation of numerous fly ash landfills and ponds and their surrounding communities worldwide. At a time when demand for scarcely available supplementary cementitious materials is increasing, fly ash landfill reclamation can represent not only a sizeable growth opportunity but also provide a sustainable pathway to decarbonize a substantial part of the cement and concrete value chain.

For the new process, ST has commissioned the world's first industrial-scale reclaimed ash drying and electrostatic separation plant located at Talen Energy's Brunner Island Steam Electric Station, in the US state of Pennsylvania. The pilot facility combines ST's new proprietary drying and screening system with ST's long-proven electrostatic separation process for removing unburned carbon from fly ash for use in concrete construction.

"This breakthrough achievement represents Titan America's commitment to the reduction of CO₂ through innovation as we plan to deploy this technology across the power generation and construction material sectors," says Bill Zarkalis, President and Chief Executive Officer of Titan America. "By harnessing the power of this technology, ST is utilizing a revolutionary beneficiation process that is capable of converting reclaimed ash from ash basins in an efficient manner. The result is a high-grade, low carbon construction product and a fuel-rich product for power generation and cement manufacturing."

The resulting ProAsh is used as a replacement for Portland cement in concrete mixes produced at ready-mix facilities. ProAsh reduces the amount of CO₂ generated in the manufacturing process, making it an environmentally friendly choice for ready-mix producers. EcoTherm, the other end product, allows cement manufacturers to generate the same high-quality cement clinker but with reduced carbon intensity and natural resource consumption.

About TITAN Cement Group

TITAN Cement Group is a multiregional cement and building materials producer. Business activities cover the production, transportation and distribution of cement, concrete, aggregates, fly ash, mortars and other building materials. The Group employs about 5,400 people and is present in more than 15 countries, operating cement plants in 10 of them, the USA, Greece, Albania, Bulgaria, North Macedonia, Kosovo, Serbia, Egypt, Turkey and Brazil. Throughout its history the Group has aspired to serve the needs of society, while contributing to sustainable growth with responsibility and integrity.

Titan Cement International SA, is the parent company of TITAN Cement Group. For more information, visit the Group's website at www.titan-cement.com.