



BILFINGER

Trade Press Release

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Bilfinger helps PRTI to cut emissions in the cement industry

- **Adapting PRTI's technology to meet strict European standards**
- **Thermal decomposition of tires to produce cleaner fuel for cement kilns**

Cement manufacturers are facing the challenge of meeting increasingly strict emission standards while continuing the energy-intensive production of cement. Bilfinger is supporting the US-based tech firm PRTI in bringing a technology to Europe that can help cement companies reduce their emissions. Bilfinger Tebodin is the engineering partner for adapting PRTI's technology so that it meets the strict European safety and environmental requirements.

"Emission standards are getting stricter in industries around the world", says Tom Blades, CEO of Bilfinger. "Bilfinger's expertise and emission reduction technologies help our customers meet these requirements in an effective and cost-efficient way."

PRTI's trademarked thermal decomposition technology processes whole car tires into valuable raw materials and energy sources such as carbon, flue gas, oil and steel. Cement producers can use fuel generated in this process to operate their kilns.

"After successfully using our technology in the US, we see great potential in bringing its many advantages to Europe now", says Kees Onstein, CEO of PRTI Europe. "Bilfinger Tebodin's renowned engineering expertise has helped us to re-design the technology to meet the strictest Dutch standards, thereby making it accessible to customers in Europe for the first time."

Bilfinger Tebodin used the combined expertise of process engineers, consultants for Process Safety and Licence to Operate and sustainability specialists to understand PRTI's process and then conceptually re-design it. One of the challenges was to extract the end materials from the reactor in a way that is safe both for the workers as well as for the environment. By installing process control configurations, parameters such as temperature and oxygen levels are continuously monitored and controlled. The occupational and process safety is safeguarded and e.g. the risk of Loss of Primary Containment is reduced to an acceptable low level. Furthermore, the Bilfinger team was able to suggest design changes that can increase the Overall Equipment Effectiveness (OEE) of PRTI's plants.

Burning tires directly to fire cement kilns results in various environmentally harmful emissions. By installing PRTI's thermal decomposition technology at their plants, cement producers can continue to use tires as a cost-efficient energy source while lowering their emissions.

At the same time, the technology helps to make use of the millions of tires that are newly produced each year, but due to very high quality standards never make it to the road. Up to 10% of total tire production is rejected and marked not suitable for use in traffic.

In the future, Bilfinger could continue to support PRTI in bringing its technology to Europe, as Bilfinger can cover a wide range of industrial services: from process design and engineering via permits and safety evaluations through to the actual construction and maintenance of plants.

Bilfinger is a leading international industrial services provider. The Group enhances the efficiency of assets, ensures a high level of availability and reduces maintenance costs. The portfolio covers the entire value chain from consulting, engineering, manufacturing, assembly, maintenance, plant expansion as well as turnarounds and also includes environmental technologies and digital applications.

The company delivers its services in two service lines: Technologies and Engineering & Maintenance. Bilfinger is primarily active in the regions Continental Europe, Northwest Europe, North America and the Middle East. Process industry customers come from sectors that include chemicals & petrochemicals, energy & utilities, oil & gas, pharma & biopharma, metallurgy and cement. With its 36,000 employees, Bilfinger upholds the highest standards of safety and quality and generated revenue of €4.153 billion in financial year 2018.

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