The world’s number one aggregates and ready-mixed concrete firm Heidelberg Materials has revealed a new single-step alternative fuel production line in India, with the help of UNTHA shredding technology.

The system has been installed at the Yerraguntla cement plant in Andhra Pradesh, owned and operated by Zuari Cement — a Heidelberg Materials Group company. This well-known Indian firm has a cement manufacturing capacity of 7.1 million tonnes per annum.

Handling both pre-sorted and unsorted municipal solid waste collected from throughout the region, it can process 20 tonnes of 100-500kg/m³ density material per hour, to produce a renewable fossil fuel substitute, used to fuel the cement plant.

An UNTHA XR3000C shredder designed for continuous operation in 50°C temperatures, lies at the heart of the facility. With in-feed and discharge conveyors including a magnetic belt for metal separation, the plant can achieve a high-quality, homogenous 80mm output in a single pass. The segregated metal content is separated and the residual on-specification fraction is used by Zuari Cement as RDF (refuse derived fuel).

Commenting on this co-processing project, Heidelberg Materials’ AF expert Robert Sweigart, said: “When we began the search for a shredder for this facility, we had stringent requirements. We sought heavy duty technology that can withstand the pressures of shredding unsorted waste, and achieve refined fuel, in impressive quantities, in only one step. Our global experience was helpful in drawing up a shortlist, then we found the UNTHA XR3000C to have a

number of technical advantages over competitors. The machine operates at a lower speed without compromising on capacity, for example, which results in lower wear. This means more uptime and lower whole life running costs."

Mr Manish Shah, Head of the India Technical Center, added: "This shredder is easy to install, operate and maintain, meets our expectations in terms of performance and allows us to vastly improve our flexibility to co-process various kinds of alternative fuels available in the market. The goal is for our co-processing facility to produce 8000-10,000 tonnes of RDF per year."

The versatile UNTHA XR3000C shredder has been engineered to handle a range of input materials with ease — including those notoriously considered too difficult to process or economically unshreddable. Zuari Cement has already proven the machine's flexibility, having shredded MSW, as well as industrial plastics, textiles, tyres, rubber, paper and biomass materials requiring further refinement for optimal co-processing.

Co-processing is an emerging market in India, and one that Zuari Cement and Heidelberg are keen to spearhead, concluded Technical Director Vimal Jain.

"We are passionate about driving environmental progress throughout our business, and the use of alternative fuels is one way to do that," he explained. "But this waste-to-energy feedstock comes at a cost, which is why co-processing makes so much sense. When designing this plant, we needed to ensure versatility to allow for changing market conditions, and an investment in technology that makes commercial sense and is built to last."

Commenting on the project, UNTHA's business development manager Taner Topcu said: "As a brand, we are working hard to further develop our relationships with cement manufacturers on a global basis, with recent success in countries ranging from Türkiye, France to Brazil – as well as now, India. I am delighted to be working with an organisation as prestigious as Heidelberg, and I look forward to seeing how our collaboration progresses in future."

UNTHA has commissioned alternative fuel production shredders in countries throughout Asia, with more than 13,000 shredders now in operation worldwide.

For further information visit www.untha.co.uk