

Mathe Group takes a 'steel' on tyre recycling

Mathe Group, a tyre recycler, is not only consuming more and more environmentally destructive used truck tyres, but has now developed two steel by-products that are being exported to Australia and Korea in growing quantities.



Clean steel ready to be exported from the Mathe Group truck tyre recycling plant.

Dr. Mehran Zarrebini, head of British investment group, PFE International, which is one of the major shareholders in Mathe Group and also owns sister company Van Dyck Floors, says that up until now, the focus has been on producing large quantities of rubber crumb. This is used to manufacture acoustic products, rubber flooring and used to resurface roads and provide infill for sports fields.

However, approximately 27% of each 68kg truck tyre is hi-tensile steel. As the plant consumes more and more tyres, the steel output also grows.

“We processed more than 100,000 used truck tyres in 2017. We have processed 35% more tyres in the period January to June 2018 than during the same period last year. These figures reflect in the sale of steel. We are expected to process close to 250,000 radial truck tyres in 2018,” says Zarrebini.



Mathe Group recycles 100,000 truck tyres

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In 2017, the total amount of steel shipped came to 1,501,184kg (January to December). Between January and June 2018, the company has already extracted and exported 987,698kg. This is more than 300,000kg above the same period last year.

Until recently, the majority of the high tensile steel was removed using magnets during the shredding process and then loaded into shipping containers and trucked to the Durban port.

Investing in new equipment

Recent investment in a de-beading machine, that removes the main steel rim from the tyres, ahead of the crumbing process has resulted in an additional steel by-product that can be on-sold.

“Last year, our shredders quickly became blunt because we were processing the whole tyre. New blades are imported and are extremely expensive. This machine removes the steel that blunts the blade before the rubber components are shredded and has therefore significantly reduced wear and tear and improved both output and efficiency,” Zarrebini points out.

Mathe Group also developed its own baling machine which it has now commissioned. This compacts the steel removed from the radial tyres that are placed in each shipping container. Compacting the steel enables larger quantities to be loaded into each container. As a result, each container holds approximately 20 tons of used steel for recycling.

Demand is growing

Zarrebini says that demand is growing not only because countries like Korea which have large car and ship building industries have an ever growing need for high tensile steel but also because their product is particularly clean.

“Clean steel which has the least amount of rubber is far easier to process. We have less than four percent rubber contamination in our product, making it far easier to process than steel sourced from elsewhere in the world,” he says.

Zarrebini says that PFE International plans to continue investing in plant that will drive up efficiencies and increase throughput of used radial truck tyres that are delivered to the Hammarsdale plant daily.

The plant came on stream in 2016 and has more than doubled output since then. It has grown employment from the 15 employees that started out working in its initial small facility in New Germany to 75 at the current plant.

Zarrebini is confident that, as the company continues to invest in new equipment to drive up efficiencies and increase output, it will ultimately create additional jobs. The majority of staff come from the surrounding communities where unemployment rates are particularly high.

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