

UNITED ARAB EMIRATES: Trashed Tyres Turn Eco-friendly

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A Sharjah waste management firm uses waste tyres to construct roads at its new state-of-the-art facility.

Going with its dubious distinction of having one of the highest number of cars per capita in the world, the UAE with around 60 million tyres lying in landfills across the country, also scores highest on wastage of tyres in the world per capita.

Each passing day adds thousands of tyres to the already inflated figure. Sharjah's landfills alone receive 4,000 discarded tyres daily, putting the total number of tyres lying waste in landfills so far at a whopping eight million.

Apart from filling huge spaces of land, which can otherwise be natural habitats, the highly flammable tyres pose huge risks. When tyres are burnt, they emit highly toxic fumes into the atmosphere, causing severe damage to the environment.

It has been a matter of great concern to environmentalists as well as the local municipalities, and the UAE's waste-management authorities have been scratching their heads to find ways to tackle this issue.

Now Beeah, Sharjah's public-private waste management enterprise has come up with an idea to convert the waste tyres into a potentially lucrative industry.

The company plans to recycle tyres into an environmentally friendly material called crumb rubber that can be used to build roads and other high-utility surfaces.

The company, which is half owned by the Sharjah government, recently set up a world class Tyre Recovery Facility (TRF), a part of the company's overall waste management solution. In the next few weeks, the facility will begin processing waste tyres that are currently found in the landfills, while gradually accepting waste tyres from other emirates as well.

Speaking to local press reporters, Beeah's Managing Director Samer Kamal shed light on the issue of tyre waste. "The issue of old tyres has been dogging the environmentalists – including us – in the UAE for quite some time. After a fair deal of research and survey we zeroed in on this process. There are many tyre recycling facilities in the world, but the mechanism they use is very cumbersome and not environmentally friendly. This process – cryogenic – was developed recently and is already in use in some of the Western countries."

The facility, which is the first-of-its-kind in the region and is one of the largest in the world, will produce crumb rubber, to be used as flooring product in local schools, parks, athletic facilities, municipalities and equestrian areas.

Displaying to journalists some of the products that the facility has produced during the trials, Kamal said: "Our facility will take these tyres and grind them into small rubber particles or granules, while separating the steel and fabric that are also found in tyres, and use those granules to make new rubber-based products, like the pavement stones. Our facility will also use tyres to produce materials that can be used in gymnasium floors, athletic tracks and sports courts."

To demonstrate its utility, the company has already constructed some tracks in one of the Sharjah parks. "We already have laid these rubber stones in one of the Sharjah parks in order to illustrate its benefits to the government, society and industry. We have had a very good response so far," added Kamal.

Rubber-based tracks and floors are already common around the world and they can be found in the UAE as well. So, what's the selling point of tyre-based products. "Tyre-based products are cheaper and better in quality. The raw material we get is virtually free as we use waste tyres where as other rubber is procured from the industry which adds to the cost," explained Kamal, adding that the quality of rubber used in tyres are perfect for flooring.

Apart from paving stones and other material for floorings the facility will also produce rubber-blended asphalt for use in the construction of new roads.

"The most important material we are planning to produce is the rubber-based asphalt. We are putting rubber into asphalt in a much higher concentration than ever done in this region before. We will make asphalt 20 per cent rubber and by doing this we are able to increase the life of roads and reduce the maintenance required. It will also reduce the amount of material used in making roads. And, the most important point is that it will increase the friction between vehicles and roads as well as making them quieter, enhancing the safety of motorists," said Kamal.

Asphalt rubber is currently used in a number of countries around the world. States like Arizona and California in the US have been making roads out of it for 30 years and the advantages over existing asphalt have proven to be huge. The return on investment alone has resulted in ongoing savings to the states who have implemented the technology.

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