

An Indian City Is Using Plastic Waste to Make Roads

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Excessive plastic is no longer a problem for Jamshedpur. Thanks to the work of the Jamshedpur Utility and Services Company (JUSCO), which is a subsidiary company of Tata Steel. This city is the first in Eastern India that uses plastic to make roads.

Using bitumen technology, scientists have found a way to use waste plastic, including biscuit packets, poly bags, etc. to construct roads. JUSCO has constructed 12-15 km roads in the steel city, as well as widened 22 roads using the environmentally-friendly technology.

Bitumen, also commonly known as Asphalt, is a sticky, black and highly viscous liquid or semi-solid form of petroleum. The primary use of bitumen is in road construction where it is used as the glue or binder mixed with aggregate particles to create asphalt concrete.

” As far as we know, Jamshedpur is the only city in eastern India where bitumen technology (Dry Process) patented by Thiagarajar College of Engineering (TCE), Tirupparankuram, Madurai, has been implemented on accumulated waste plastic for the first time”, Gaurav Anand, Senior Manager (Quality Assurance) of JUSCO said on April 29.

Anand, who is an environment engineer, says there are no maintenance costs for the first five years. He also said that for every one km long and four metre wide road using this technology, one tonne of bitumen costing Rs 50,000 is saved.

The use of bitumen has reduced by 7% since JUSCO began this initiative. Anand said the longevity of roads made of waste-plastic-bitumen was two times better than bitumen roads.

Besides that, it is also water resistant, has a better binding property, higher softening point, can withstand high temperatures and higher loads and has lower penetration value. That's not all. The technology costs less as compared to bitumen road and has no toxic gas emission.

JUSCO has received a number of requests to duplicate this technology from states such as, Chattisgarh, Himachal Pradesh, Uttarkhand and Jharkhand. It has also received a request from Nigeria, whose government wants to replicate it in their country. However, JUSCO has no plans of commercialising this discovery, only to use it to serve society.

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