Recycling of Plastic Waste into tiles for designing structures for Societal Usage

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Development of Technology

Background

Plastic pollution involves the accumulation of plastic products in environment that adversely affects wildlife, habitat, and humans.

5 Billion tons of plastic waste is generated worldwide.

Waste plastic Bags + bottles Shredded into small pieces

Shredded plastic mixed with fillers and molded into tiles

Tiles used in fabricating structures.

Plastic is a Menace

- Non-bio-degradable
- Burning cause pollution
- Leads to global warming
- Disposal is a problem

Stray cows in India are forced to eat plastics as they search for food

Tiles installed at Sector 15, Bandh Area, Gurugram

Pavement tiles

Plastic Waste From Liability to Viability

Missions & Challenges

- Make in India
- Swachh Bharat
- Innovate in India
- Swasthya Bharat
- Smart Cities
- Smart Villages

Benefits...

Novel feature of the fabricated tiles:

- Mechanical strength
- Flame retardency
- UV protection
- Antistatic response

These tiles can be used in pavements, floor tiles and roof tiles & designing of structure like **Smart Toilets** that will be beneficial for the villages and large section of the society.

Technology transferred to Seven Industries in India

Technology has won Smart Fifty Innovation Award in 2018

SMART FIFTY
50 Solutions to Transform India

Market & Customers

Municipal Corporations, NRDC, DDA, GOI

Patent Filed (i) A process of making composite tiles by utilizing waste plastic (2016). S.K. Dhawan, Brijesh Sharma, Ridham, Pradeep Sambyal, Md. Farukh, Ram Dhan Sharma, R.K. Bindal & D.K. Aswal – 201611025127; (ii) A process for the recycling of Multilayered plastics (2021) S K Dhawan, Rajiv Singh, Ridham Dhawan, Mahesh Kumar, Rajesh Seth, S R Dhakate

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