



Sameer Panda-led Indian team won NASA award for Burst Prevention & Puncture Curative technology

They won the award for the Mild Run Flat Tyre based on BPPC technology in the Create the Future Design Contest- 2015 conducted by NASA Tech Brief.

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A team of Indian scientist led by Sameer Panda from Odisha on 6 November 2015 won the NASA award for an innovative technology named **Burst Prevention & Puncture Curative (BPPC)** technology. Udit Bondia, KN Panda and Smitiparna Satpathy are the other members of the team.

They won the award in the Create the Future Design Contest- 2015 conducted by NASA Tech Brief in New York. Tech Brief is a contest jointly organized by NASA and Society of Automobile Engineers, International.

They won the award for **Mild Run Flat Tyre** based on BPPC technology and developed by TycheeJuno, a firm working on Disruptive and Breakthrough Innovation in technology mostly related to automotive division.

The tyre is a multi-chambered tubeless tire with sealant inside the chamber to take care of puncture in tread and sidewall.

Importance of the technology

- The technology decreases the possibilities of bursts, takes care of punctures and dynamic wheel balancing.
- It helps to increase fuel efficiency and life and can also be manufactured with existing technology.
- Using this technology in 10 million vehicles can lead to reduction in carbon emission due to tyre replacement up to 200000 ton CO2 annually.
- It can also lead to reduction in consumption of gasoline up to 100 million gallons.
- Use of cancer-causing lead, which is used for wheel balancing, can also be avoided by using this technology. For instance, 500 tons of cancer causing carcinogenic Lead (RoHS material) can be avoided.

In 2014, bursting of tyre caused 3371 deaths and 9081 injuries in India. Similarly in the US alone around 33000 injuries occur every year due to tyre. Globally, 1.25 million injuries and casualties are estimated to occur due to tyre bursts.