

City scientist develops tech to increase metal life up to 3 times

■ Tata Motors, Reliance Industries, Nirlep using technology

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Wear and tear of machine parts is a common problem faced by every manufacturing unit. Apart from leading to shutdowns, it also adds to the maintenance cost. City scientist Dr Kavita Pande has developed a processing technology that will help industry players bring down this cost.

The technology developed by Pande increases the life of machine parts by as much as 2-3 times. It not only helps in bringing down cost but goes a long way in saving natural resources.

"Frequent wear and tear

of machine parts means the industries have to buy them afresh. This leads to exploitation of natural resources like different ores. Our technology helps in saving cost as well as environment," Pande told *Lokmat Times*.



Dr Kavita Pande

The technology involves thermal treatment of material and can also be used on ceramic and polymeric components. Thus, it has a wide scope across different industries. Big names like Tata Motors, Reliance Industries and kitchen appliance maker Nirlep are among the

Adding strength and durability

■ Processing technology uses thermal treatment on metallic, ceramic and polymeric components.

■ Increases life of parts made of metal, polymers and ceramic by as much as 60%

■ Can give extra stability and longer life to prosthetic implants

■ Provides extra toughness, hardness and tensile strength to processed material

■ Processed machine parts survive wear and tear for longer duration thus reducing maintenance cost

■ The technology has been patented by Dr Kavita Pande.

manufacturers using the technology in the validation stage, Pande informed.

The technology promises to be a boon for the prosthetic implant industry too. "Apart from giving extra life, my processing technology also gives added stability to the

material. This will be a big plus for prosthetic implant makers," said Pande, who did her MSc in chemistry from Institute of Science.

Pande said that she stumbled upon the idea after reading about Swiss watch makers.

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City scientist...

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“Swiss watches are known for their precision and durability. The makers used to keep the small gears used in making the watches in ice bags for a season. Later, they were assembled in watches,” Pande said.

Pande completed her PhD from Visvesvaraya National Institute of technology (VNIT). After coming up with the technology, Pande tied up with Indian Institute of Management (IIM) Nagpur’s incubation centre, InFED. Her startup project was also recognized by the Government of India. The ministry of micro, small and medium enterprises (MSME) gave Pande’s project a funding of Rs 12.5 lakh during the ‘Ideas for New India Challenge’ in 2020.

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