

# Tata Steel adopts green tech to reduce emissions

Our Bureau  
NEW DELHI

**T**HE country's largest private sector steelmaker, Tata Steel, is adopting nanotechnology-based products to help reduce emissions and boost efficiency. The company consumes 30,000 litres of diesel everyday and in a first-of-its-kind move has given the green signal for the use of Eco-Neev, a nanotechnology-based additive, in diesel.

The approval comes after four months of trial, during which Tata Steel evaluated the efficiency of Eco-Neev. Other companies using Eco-Neev on a trial basis include Lafarge Cement, Bharti Shipyards, Himachal Road Transport Corporation and Karnataka State Transport. Eco-Neev has been developed by first generation entrepreneurs AK Srivastava and Kumar Binit. They have also founded a company, Nand Ipl, to focus on developing nanotechnology based products.

Eco-Neev is diesel fuel combustion catalyst. The basic raw material used is a Cerium. Cerium, an oxidation catalyst, has been in use for the last 70-80 years in all vehicles which burn fuel. It has been used in the form of a metal strip in the catalytic converter of

vehicles which helps in reducing the smoke coming out from exhaust pipes. Nand Ipl's Eco-Neev is delivered in the combustion chamber pre-mixed with the fuel (diesel) and improves the way fuel is burnt. This results in reducing emissions released by diesel engines, including carbon dioxide and unburnt hydrocarbons. It also

helps burn deposits inside the engines. The company claims up to 7% fuel saving as well as reducing carbon deposits in the engine and lowering emissions. Eco-Neev took about seven years to develop.

Says Kumar Binit co-founder and managing director, Nand Ipl, "we took, cerium, converted it to cerium oxide using nanotechnology, to ensure it easily disperses with diesel. The result is increased combustion and reduced emission." The fuel-borne catalyst is composed of particles of cerium oxide 10 nanometer (nm) across. Cerium oxide catalyses the conversion of carbon monoxide and hydrocarbon gases to carbon dioxide and water. It also reduces nitrogen oxides. Says Hyder Ali, chief maintenance officer, Tata Steel, "after a four month trial we have adopted the product. It delivered an efficiency (reduced costs) of 7% and reduced emissions as well." There are other fuel additives available in the market, that claim similar features. However, Mr Binit says, "the activity of EcoNeev is maintained throughout the combustion process. Thus more power can be extracted from the same amount of fuel and combustion chamber deposits are removed, a feature which differentiates Eco-Neev with other additives." Outside India, it has been in the market under the brand name 'Envirox' for a few years now and is used by companies like Stagecoach, the UK based road transport provider.

## GREEN PUSH

**Tata Steel consumes 30,000 litres of diesel everyday & in a first-of-its-kind move has given the green signal for the use of a nanotechnology-based additive in diesel**