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Lanxess India's MD and country representative spoke to **Brian de Souza** on the new Jhagadia plant and the green credentials of the company's product line-up.

What were the highlights of 2011 for Lanxess India?

Lanxess India started 2011 with the ground-breaking for the semi-crystalline products (SCP) plant at the Jhagadia site in Gujarat that was inaugurated in January 2012. This plant will produce Pocan and Durethan, a range of polyamides which represent a lighter-weight plastic alternative to metals and have several applications in the automobile industry. In January, we also relocated the facilities for the business units Material Protection Products (MPP) and Rhein Chemie (RCH). In December 2010, we commenced production at our ion exchange resins facility.

Last year also brought us several accolades including the 'Best in Class' Global Performance Excellence Award in the large manufacturing category for Lanxess' manufacturing site at Nagda, Madhya Pradesh and the Indian Merchants Chamber's Ramakrishna Bajaj National Quality award 2010 in the 'manufacturing category'. Plus Frost & Sullivan's Green Excellence Award for our efforts to ensure sustainable development in a commercially viable manner.

What are Lanxess' objectives for Jhagadia and what role will it play in Lanxess' Asia operations?

Jhagadia is a greenfield investment built to world-class standards. Spread over 18 hectares, the site hosts the manufacturing facilities for five out of 13 Lanxess business units — rubber chemicals, ion exchange resins, SCP, MPP and Rhein Chemie. Several products from these plants will be supplied to both local as well as export markets. The site also boasts of utility services like effluents treatment plant, an offgas incinerator and, most importantly, a cogeneration plant that runs on natural gas, an eco-friendly fuel. The global Lanxess policy formulated and implemented for process and plant safety, health and protection of the environment (HSEQ) has been implemented at Jhagadia over and above the applicable laws of the land. At Jhagadia, Lanxess is creating a specialty chemicals hub for the region, to serve our customers not only in the rapidly growing local market, but also for the APAC region.

Who are your clients in the Indian market?

With reference to the SCP, carmakers like Tata Motors, Volkswagen India, Hyundai and Ford use the Durethan product range for their cars.



"We take all steps to minimise our environmental footprint at all our 48 manufacturing sites worldwide. And we have stringent policies in place for our products, processes and people."

For our array of products in synthetic rubber and rubber chemicals, all global and most large Indian tyre manufacturers are our customers.

As OEs attempt to go greener, what are their expectations from a player like you?

With increasing mobility, buyers now place increased focus on technology, safety and comfort. OEMs too are keen to make their products more fuel efficient and better on other parameters of performance. For instance, Audi uses our technology in its new flagship A8 model. The plastic-metal composite technology developed by us is used in the front end of Audi's new top-of-the-range model. The component is a beam in the engine compartment to which, for example, radiator and headlight assemblies are attached.

Apart from front-end modules, we have

projects in the pipeline and at planning stages for converting several metal parts into plastics in India such as – air intake manifolds, oil module, door handles, oil pans, coolant water pipes, fuel tank, thermostat housing and fuel rail. These parts have already been successfully replaced with Durethan or Pocan in Europe, Japan and US.

Another example concerns tyres. The implementation of tyre labeling in the European Union, South Korea and Japan will encourage tyre makers to supply tyres of higher grades. This will create an opportunity for our high-performance rubbers that imparts those qualities to tyres.

How does Lanxess ensure that eco-friendly norms are followed?

Lanxess puts a lot of emphasis on protection of environment and safety of people. We have stringent policies in place for our products, processes and people, compliance of which is mandatory for all our 48 manufacturing sites worldwide. We take all steps to minimise our environmental footprint. An example of this would be the offgas incinerator at our site which we invested in to offset harmful nitrogenous gas emissions. A well-laid out effluents treatment set-up, a waste water treatment plant and a green zone at the site are all examples of our commitment to sustainable development. More importantly, we are driven by continuous innovation.

A structured approach to innovation with specific customer needs in local markets ensures that the products meet the environmental norms as well.

Rhein Chemie makes products for tyres and other rubber products. How do these products help your customers to be more environmentally friendly?

Lanxess-owned subsidiary Rhein Chemie offers an extensive palette of tailor-made active ingredient compounds and specialty chemicals for the rubber, lubricant and plastics industries.

RCH is also a leading manufacturer of release agents and curing bladders for the tyre industry. The demand for these products is expected to expand in parallel to global tyre production, which is expected to grow on average by approximately five percent per year in the next 10 years.

We have Rhenodiv, a product from the business unit Rhein Chemie, which is a water-based release agent as opposed to the solvent-based release agent used earlier. It is fully biodegradable and eco-friendly. Solvent-based products are explosive, cause health hazards and environmental pollution. A tyre plant producing 20,000 radial tyres for passenger car per day emits 800kg of organic solvent everyday or 200 tonnes per year, which can be totally eliminated by using water-based release agents. By using these release agents, the user need not stock solvents at their plant.



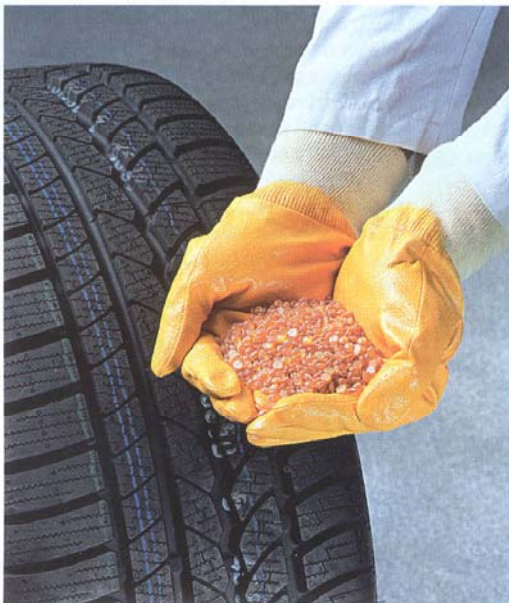
High-tech plastics help reduce component and vehicle weight and thereby CO₂ emissions.



Bumper made from Pocan high-performance plastic which enables components to be produced without time-consuming post-moulding treatment and is around 20 percent lighter.



Charge air tube made from Durethan polyamide. Like Pocan, it represents a lighter-weight plastic alternative to metals and has several applications in the automobile industry.



Green tyres can reach their peak performance with formulations containing Nd-PBR and SSBR types of high-performance synthetic rubber.

With tyre labeling becoming mandatory in Europe, what role can Lanxess play in helping tyre makers produce eco-friendly tyres?

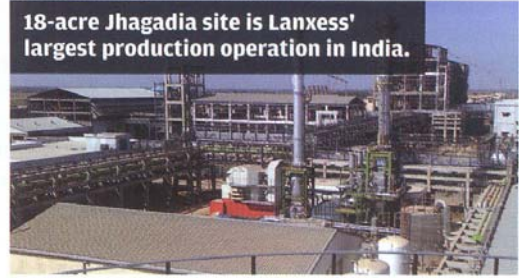
Lanxess has over 100 years of expertise in the development and production of synthetic rubber and rubber chemicals. Half of our sales globally are to the rubber industry and to tyre manufacturers. As the world's largest synthetic rubber company, Lanxess is a key supplier of neodymium polybutadiene rubber (Nd-PBR) and solution styrene butadiene rubber (SSBR) to leading tyre manufacturers. Green tyres can reach their peak performance with formulations containing both types of rubber. Lanxess' rubber helps in reducing the rolling resistance coefficient and in improving the durability co-efficient of tyres. Lanxess is an enabler of high-performance tyres.

What has Lanxess done in recent years to make its product range eco-friendly?

Our R&D departments constantly address issues of overarching importance to the chemical industry and try to devise timely solutions. We are committed to solving everyday problems as they arise, but we look into the future as well. One of the key mandates of our R&D scientists is to understand emerging needs and develop new products and services to satisfy those needs in the future. Some of the noteworthy innovative solutions for the auto industry provided by Lanxess are:

Nanoprene: This is an innovative rubber additive that, when added to a tyre's treads, can significantly improve the tyre's grip on wet roads as well as resistance to abrasion. It increases fuel efficiency, which translates to lower carbon emissions. Unlike other chemical additives that improve abrasion resistance and wet grip, Nanoprene does not affect other tyre parameters adversely. Nanoprene also significantly reduces emissions of rubber particles from a tyre and increases its lifespan. Moreover, Nanoprene can be used as a component in fuel cells, where it raises the reaction temperature from 60deg C to 200deg C. This translates to a much higher engine efficiency for engines under development for future generations of cars.

Therban: This is an innovative new rubber product based on Nobel Prize-winning research and meant to tolerate extreme environments durably. Due to its unique chemical structure, Therban allows for increased flexibility in processing while at the same time decreasing energy requirements and processing time. ■



18-acre Jhagadia site is Lanxess' largest production operation in India.