

Towards Sustainable Operational Excellence

Birla Carbon, global leader in carbon black production and supply, has successfully tackled the biggest challenge faced by carbon black industry: Sustainability. It is at the core of the company's vision, says John Loudermilk, Chief Operating Officer (COO)

▲ **By Sharad Matade**

Birla Carbon, world's largest manufacturer and supplier of carbon black additives, has marked sustainability as the core of its global business vision. Carbon black producers have traditionally been facing the challenge of ensuring their products meet sustainability norms and Birla Carbon has successfully taken up that challenge, says John Loudermilk, the company's Chief Operating Officer (COO).

"We have made sustainability a foundational aspect of our business as represented by our vision, 'to be the most respected, sustainable, and dynamic' in our industry," Loudermilk told *Tyre Asia*.

Birla Carbon's perspective on sustainability is holistic, covering areas normally associated with the term such as environment, safety, and health along with those people might not connect to sustainability such as people development and financial performance, he said.

Loudermilk added: "We view sustainability as a way to ensure our long term future as a company, as well as, the future of the planet.

John Loudermilk, Birla Carbon

Initiatives we focus on include business continuity management providing assurance to our customers that we will be the most reliable supplier, product stewardship to help our customers utilize carbon black safely to meet their critical needs, and life cycle assessment throughout the value chain from base raw materials extracted from the earth through finished goods delivered to our customers to identify opportunities that make our business more sustainable.

"Our Sustainable Operational Excellence strategy influences every decision we make. The approach drives us to share and adopt best practices across the business to continuously improve and promote consistency. It is a real differentiator for Birla Carbon.

"We are proud to be seen by many customers as leaders in this arena through participation in their own sustainability efforts. It is also rewarding to be recognized by leading sustainability rating agency, EcoVadis, as a Gold Level practitioner in the top 1% of all companies reviewed."

Exploring markets

Birla Carbon has a global presence, which helps it deliver highest quality carbon black to customers, wherever they are. The company is continuously exploring markets to strengthen its position.

"As a leader in the industry participating in all key market segments for carbon black, we feel a responsibility to support the success of each. We are investing in fast growing geographies like China where our newest facility began operations in August 2017, demonstrating our commitment to support our customers where they grow. We work closely with customers through joint development initiatives to create products that meet their individual needs with a clear focus on key industry trends like light weighting and more energy efficient tires. Through these investments in plants and technology, Birla Carbon intends to grow its position in all markets," he said.

Expansion in diverse markets exposes one to various regulations, which poses another big challenge. Loudermilk says that this is an area

where Birla Carbon has proven its strength. "With operations in all regions of the world, we have long experience in managing the complexity of differing regulatory requirements while designing and operating facilities that can meet the most stringent of norms. We do and always will be well positioned to comply with all regulatory requirements while maintaining the ability to produce our entire product range and deliver efficiently to the market," he said.

The global carbon black industry has seen consolidations in recent years. Loudermilk observed that consolidation has served to make stronger competitors in the industry "pushing us to stretch further to differentiate ourselves as a leader. Creating value for our customers requires more investment in innovation and services. As the dynamics in the industry have changed, customers benefit from the ever rising bar of capability and competitiveness. We welcome these challenges as they provide motivation for us to fully leverage our unique capabilities."

He said: "Carbon black plays a key role in everyone's life; however, people in general do not understand our product. There are several levels to its social value but, essentially, carbon black makes products stronger and more durable. It enables the everyday: from tyres to shoe soles, water pipes to newspaper ink, sealants to power cables.

"While many of these applications have been around for a long time, innovation is what drives their improvement. We have introduced products that can reduce the energy required to move your vehicle, enhance the color of the paint on your car, and improve the conductive properties of plastic materials in recent years.

"We have also developed new process equipment to improve conversion of raw materials into carbon black, reduce the energy required to support our operations, and reduce our environmental impact."

Changing trends

Automobiles are undergoing dramatic changes and each part is going through transformations. The focus is now on lighter, durable

products that are environment-friendly, which puts pressure on R&D activities related to product development.

"We focus on the market trends and work closely with our customers to understand where they need help delivering value," Loudermilk said. "From this, we utilize our experience and knowledge to help solve their problems. The areas you mention are among the key objectives for our customers and we see ourselves as well positioned to help them deliver.

"Our product development scientists are focused clearly on improving energy efficiency whether that be helping to light weight rubber products or reduce the rolling resistance that requires energy to move vehicles. This is an area where carbon black can make a real difference.

"To solve these problems and enhance the performance of our customer's products, we are continuously working more closely with our customers and suppliers of other materials into these end uses. Our teams have gotten better at leveraging their knowledge by collaborating beyond our organization. This multiplies the effectiveness of our more than 50 scientists in two global R&D centers to commercialize better products faster."

Though silica cannot replace carbon black fully, it is now a growing competitor for carbon black.

He said: "The objective of our tyre customers is to optimize the sometimes competing performance characteristics of their product such as tread wear, wet and dry grip, and rolling resistance along with the efficiencies of their manufacturing process. The challenge for us is less about silica and more about how we innovate to help our customers meet those objectives with our products.

"We are working on some pretty exciting technologies that allow carbon black to interact with various elastomers to provide characteristics that exceed those of competing materials like silica in a more efficient production process for the tyre manufacturer. We expect these efforts to develop into a portfolio of solutions for our customers helping them achieve their objectives as

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these products begin to be commercialized. Ultimately, this will be a growth driver for Birla Carbon by helping our customers deliver value.

Loudermilk added: "Birla Carbon offers high-quality products across the full spectrum of performance needs. At the same time, we are looking for opportunities to leverage the carbon black performance through combinations with other novel materials. A good example of this is a Joint Development Agreement to study the potential of combining nanocellulose and carbon black in tires we have with American Process Inc., a technology leader in this space.

"We have a nimble technology organization that has demonstrated a keen ability to work well with other parties to develop products. This skill helps us in understanding new material compatibility potentials quickly and makes us a preferred development partner for technology companies looking to penetrate this market.

Regarding collaborations between producers of recycled carbon black and established carbon black players, he said: "The focus on sustainability and the environment will necessitate all industries to look closely at topics like recycling and create economic opportunities as new technologies evolve. We will continue to look at all aspects of the carbon black value chain for these opportunities."

It has been over five years since the acquisition of Columbian Chemicals. Aditya Birla Group acquired US based Columbian Chemicals Company in 2011, forming the world's leading carbon black producer from two

historically strong players in the market. "Our experience started with an open mind on both sides as the companies came together with the only objective to make the most of the opportunity. Because of that, the organization was allowed to build the culture we aspired to leverage strong shared values like integrity, commitment, passion, speed, and seamlessness.

"The rich operational history of each company provided unique opportunities for sharing best practices that could quickly be implemented to deliver synergy. This sharing was the conduit for people to move throughout the business and see what we could be first hand while making a meaningful impact on our results allowing everyone to feel valued as a part of Birla Carbon," he pointed out.

On future carbon black market, he said: "There has never been a more exciting time to be supporting the transportation industry. Rapid changes in electric vehicle adoption, shared transportation compared to personal vehicle ownership, and driverless technology will all provide opportunities for us to help our customers create value. Our investments will be in technology to exploit these opportunities and in capacity where our customers choose to grow. The new facility in China is a perfect example of ensuring we do that effectively meeting their needs.

"I see carbon black remaining a key ingredient in tires along with the other applications we serve throughout this upcoming revolution. We anticipate growth with a preference toward a supplier that can be innovative, sustainable, and reliable consistent with the strengths of Birla Carbon." ▲

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