Tata Steel heralds sustainability strategy for automotive sector

Tata Steel has outlined a future-facing strategy that will move the company into the next era for manufacturing in the automotive industry. Outlining short, medium and long-term ambitions, the plan developed by Tata Steel addresses three key areas: Electrification, autonomous driving and shared use; Digitalisation and service offering; and Sustainability.

These plans project towards a future that Tata Steel predicts will be an automotive market based on mobility services using shared autonomous vehicles, with the majority of vehicle sales being on a business-to-business basis as fewer consumers own cars. Tata Steel predicts that by 2050, these will primarily be propelled by an electrified powertrain though other technologies, such as H₂ fuel cells, will also increase in popularity until then.

The plans will support vehicle manufacturers today and in the future as they develop the next generation of hybrid and electric vehicles. The short-term strategy outlines how Tata Steel deploys a range of lightweight steels for reducing weight and cost of crash components in vehicles that are more efficient by using less energy to move. In addition, deployment of reliable steel solutions for energy storage and E-motors will help to improve driving range and cost of the vehicles in the medium term while a longer-term strategy invests in the development of new solutions for a further optimisation in future generations.

Digitalisation within the automotive value chain allows for through-chain material traceability and quality tracking, for a more efficient processing and continuous adaptation to customer-specific demands. Advanced engineering services improve the accuracy of simulations and reduce prototyping time and costs, while advanced digital services optimise processes by enabling predictive manufacturing. In the longer term, Tata Steel expects an overall faster time to market for new products that are tailored better to customer needs, ultimately supporting customers to achieve improved quality and a lower TCO.

With sustainability as an overarching goal, Tata Steel has made various investments that contribute towards the overall sustainability of its manufacturing facilities. By using a Life Cycle Assessment service to help customers understand their carbon footprint, Tata Steel continues its commitment to through-chain sustainability. Tata Steel will furthermore support customers in their achievement of improved sustainability, by offering an advisory service focussed on bespoke projects within the three pillars of CO₂ performance, circular economy and responsible supply chains. As its ultimate ambition, Tata Steel has begun work on plans to make large asset investments to create the steel plant of the future – one key factor being implementing new technology to produce liquid steel, enabling up to 80% reduction in CO₂.

Basjan Berkhout, Marketing Manager Automotive at Tata Steel Europe, said: "We are committed to pioneering the next generation of steel products for car manufacturers, allowing them to further lightweight vehicles and reduce vehicle emissions as well as improving their manufacturing efficiencies. We have plans to create the steel plant of the future as we set out our commitment to sustainability."

"Latest forecasts continue to predict increasing sales of electric vehicles over the next 30 years bringing an additional 4.2 million tonnes of advanced steels to the European market. Vehicle structure steel solutions, E-motor steel laminations and steel battery solutions are expected to see a sharp increase in demand stimulated by companies wanting to make their vehicles carbon-neutral over their complete life-cycle."