



SAFETY AND SUSTAINABILITY: MAGNA'S APPROACH TO TESTING

THE CAPABILITIES OF MAGNA'S TOP-SECRET TEST CENTER IN GERMANY RANGE FROM CREATING REAL SNOW IN A CLIMATIC CHAMBER TO CHECK COMPONENT DURABILITY TO CRASH-TESTING THE BATTERIES OF ELECTRIC VEHICLES.

The state-of-the-art Advanced Car Technology Systems (ACTS) subsidiary has its own dummy laboratory, performs 600 crash tests a year, and has five industrial robots that repeat tasks tens of thousands of times, such as opening and closing a car door, as part of endurance testing.

Safety and sustainability are at the heart of everything ACTS provides for its 400 OEM and supplier customers in 19 countries who rely on the center as a key development partner. Vehicles that are defining this transformative era, such as the 2019 Porsche Taycan, the German automaker's first electric car, are tested here.

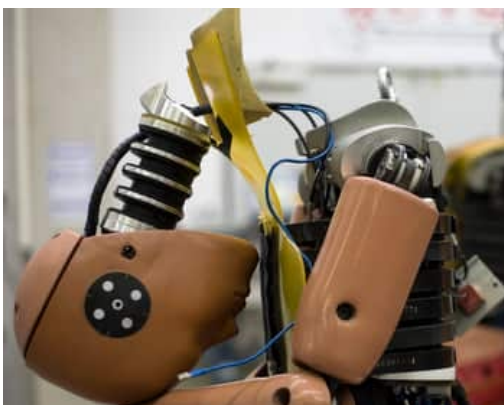
"We started with passive vehicle safety, but a major focus for us now is battery testing for electro-mobility," explained Dirk Babock, ACTS general manager. "This is a new field for the development departments of the OEMs. We started doing battery tests five or six years ago, and now do 10-20 battery tests per month for electric vehicles, with a focus on the safety of the battery in a crash test and other situations."

Automakers increasingly are turning to the test center for help in sustainability, everything from making electric vehicle batteries that are lighter and safer to reducing waste.

"Cutting down on waste means making sure everything we test will not fail, not the component or the car," Babock said. "Testing is the last check that everything will function for a long time, not just one time. If you look at emerging markets like Africa, cars are on the road for a long time. This is how we think about sustainability."

Spread out over three locations in Sailauf, Sindelfingen and Renningen, Germany, the 240-member ACTS team is ready for the next wave of alternative-energy vehicles.

"Fuel-cell vehicles, cars with a battery system and a fuel cell that uses hydrogen, will be the next generation," said Babock. "We have the capability to test them, too. We haven't done them yet, but we are prepared for them."





'OPTIMIZING EVERYTHING'

Dirk Babock controls and monitors the washing machine, dryer, refrigerator and other home appliances used by his family of four from his tablet, and has reduced his household electric power consumption by "a minimum of 50 percent," he notes.

"It's easy," said Babock, the general manager of Magna's Advanced Car Technology Systems in Sailauf, Germany. "I measure the power consumption of every device in my flat. The worst one was the freezer I got from my mother-in-law when I was younger. It was drawing a lot of power and running all day. So, I bought a new freezer. After one year it was a big savings."

He adds: "There is no difference between what I do at home and what I do at the company."

A new energy-saving initiative at ACTS is similar to Babock's approach at home, and focuses on measuring power consumption throughout the facility to track peak usage and improve technical performance for less cost.

Before coming to Magna 20 years ago, Babock, an electrical engineer, set up power plants and high-voltage systems for utility companies in Germany.



"I love optimizing everything," Babock said. "Not only electrical energy, but everything."



DIRK BABOCK, general manager of Magna's Advanced Car Technology Systems

"As a young engineer, I dreamed of creating power plants, but power plants are not as fast as the auto industry," he said. "I have a lot of fun every day now. The fun part is that you always have another problem you have to solve. What I enjoy is bringing solutions to the team and helping them to perform."

His next "green" idea is always just around the corner. At home, it may involve solar panels on his roof, his garden or other projects that mean less waste.

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