LANXESS at the VDI Congress "Plastics in Automotive Engineering", April 3 – 4, 2019, Mannheim, Congress Center Rosengarten

Focus on new mobility and the substitution of polyamide 66

- e-Powertrain team for electromobility founded
- Newly developed, fatigue resistant polyamide 6 types

Cologne – "High-Tech Thermoplastics for Future Mobility": This is the slogan under which the High Performance Materials (HPM) business unit of the specialty chemicals company LANXESS will be showcasing at the VDI Congress "Plastics in Automotive Engineering" in Mannheim. "Our focus this year is on new applications in electromobility and cost-effective alternatives to polyamide 66 compounds. We are also focusing on lightweight design with continuous-fiber-reinforced thermoplastic composites and new solutions such as hollow-profile hybrid technology," says Dr. Martin Wanders, Head of Global Application Development in HPM.

Electromobility – growing market

LANXESS set up the "e-Powertrain team" in response to the tremendous application potential of its polyamides and polyesters in the market for forms of new mobility. The team helps customers from the international automotive industry to choose tailor-made application-specific materials for electric vehicles. "We also support our partners throughout the entire development chain for their components, for example with engineering services for the component design like moldflow calculations, structure simulations and tests on finished parts," says Julian Haspel, who heads the global "e-Powertrain" team.

LANXESS sees a variety of important applications for its thermoplastics in the field of electromobility, including charging

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systems, inverters, electric motors, auxiliary systems (e.g. cooling pumps) and battery elements. Potential battery applications include cell holders, spacers, covers, module carriers and housing parts. Haspel: "Our thermoplastics are in many cases an alternative to conventional materials such as die-cast metals, for example in crashrelevant structural components of the battery. But there are also entirely new potential applications, for example with our electrically insulating but thermally conductive compounds."

Support for substituting polyamide 66

LANXESS has recently observed increasing demand – mainly from the automotive industry – for alternatives to polyamide 66 due to the limited primary product capacities for this thermoplastic, which have led to supply bottlenecks and major price increases for compounds. "We are helping our customers to find alternative materials to secure a reliable and cost-effective supply and to minimize the technical risks involved in switching over to a new material. Our services include everything from innovative alternative materials and extensive service in aspects ranging from material data and application support to technical production support," says Tim Albert, who heads a corresponding international team at HPM.

High-modulus polyamides for structural components

One example of a material innovation where polyamide 66 can in many cases be replaced is the new Durethan P (performance) polyamide 6 series. The products are extremely resistant to pulsating loads, even at the high temperatures inside the engine compartment. Their mechanical properties are similar to those of polyamide 66. "The substitution can usually be made using compounds with the same glass fiber content, which means that the components are not any heavier," says Albert. At the VDI Congress, HPM will be showcasing from its product range two new examples featuring 50% and 60% glass-fiber reinforcement. Their high strength and rigidity make them ideal for the lightweight construction of battery



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components or other parts such as oil filter modules, chassis bearings, damper pistons and seats.

The future of the European automotive and plastics industries

LANXESS is also playing an active role in the congress program. Dr. Axel Tuchlenski, for example, who heads global product and application development at HPM, is one of the experts appearing in the panel discussion entitled "Innovations in the Automotive and Plastics Industry: Is Europe Running out of Time?". The event will take place on April 3, 2019, at 9.45 a.m.

LANXESS is a leading specialty chemicals company with sales of EUR 7.2 billion in 2018. The company currently has about 15,400 employees in 33 countries and is represented at 60 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

Cologne,	March 18, 2019
mfg	(2019-00016e)

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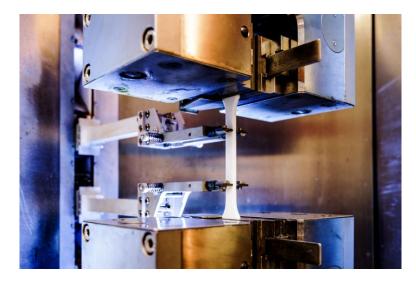
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Image



LANXESS supports customers worldwide in all phases of plastic component development with its tailored HiAnt services. These include, for example, tensile tests to determine material data. Photo: LANXESS AG

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