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INTERVIEW

Michael Effing talks to PIE / "Hybrid moulding, SMC and high-pressure RTM will come out on top" / Composites Germany chairman believes composites applications still have huge potential

Michael Effing (Photo: AMAC)

Michael Effing, chairman of the **Composites Germany** (Berlin / Germany; www.composites-germany.org) and **AVK** (Frankfurt / Germany; www.avk-tv.de) industry associations and founder and CEO of **Advanced Materials Advisory & Consultancy** (AMAC, Aachen / Germany; www.amacgmbh.de), shares his opinions on the ongoing trends in the European composites sector.

PIE: During the recent "IAA" industry fair, a number of companies said they had postponed or completely discarded projects for structural parts made of GRP. How does this correspond with Composite Germany's statement that composites are a key technology?

Effing: I don't share this impression. During my recent visit to IAA with 15 of **AZL**'s (www.azl-aachen-gmbh.de) partner companies, I saw a number of new CRP applications with thermoset and thermoplastic matrix systems, in addition to the more well-known **BMW** ("i3"/"i8") and the newly introduced "7" series. One example are **Plastic Omnium**'s applications in the SMC, thermoplastics and RTM field. In this regard it is important to point out the transverse bumper beam, developed in collaboration with **Hyundai** and manufactured using thermoplastic pultrusion. The beam is 40% lighter than the steel equivalent and manufactured at a cost that is considered acceptable for large-scale series production. This application actually won the "AVK innovation prize 2015". Another up-and-coming field is the so-called high-performance SMC, using glass or carbon reinforcements.

PIE: Despite the leaps made in the development of fibre-reinforced plastics in recent years, only some automotive applications have actually started serial production. What is the main obstacle to growth?

Effing: BMW's decision in favour of carbon technology gave a massive boost to the entire industry. Using multi-material systems in combination with composites allows us to reach the CO_2 targets. Every material has its pros and cons and, by implication, also its justification for use in an automotive manufacturer's portfolio. The key lies in applying the right material at the right place. A part's costs are the first design criteria. Processing technology is making huge strides. All the leading moulding press producers – including **Cannon**, **Dieffenbacher**, **Engel**, **Fagor**, **KraussMaffei** and **Schuler** – now offer composite systems, even if these account, until now, for less than 5% of their revenue. Nevertheless, every one of these companies continues investing in this technology and will present their latest innovations at "K 2016".

PIE: A lot of new materials and technologies have just been launched. Which of them do you think will come out on top over the course of the next five years?

Effing: I believe the most promising processes are technologies like thermoplastic hybrid moulding (injection moulding with thermoplastic composite inserts made by tapes and so-called "organosheets"), high-performance SMC (using glass, carbon as well as UD reinforcement) and high-pressure RTM. In many instances, these processes are also combined or integrated with each other. From a cost perspective, glass fibres will remain the most important reinforcement fibres.

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